

ANNUAL REPORT

CLEARINGHOUSE ON DEVELOPMENT COMMUNICATION

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BUREAU FOR SCIENCE AND TECHNOLOGY • OFFICE OF EDUCATION
DIVISION OF EDUCATIONAL TECHNOLOGY AND COMMUNICATIONS

SECOND ANNUAL REPORT

CLEARINGHOUSE ON DEVELOPMENT COMMUNICATION

Contract No. AID/DPE-1231-C-00-4066-00

September 1, 1985 - August 31, 1986

OBJECTIVE

The objective of the contract is to provide information and services related to the application of appropriate technologies in development communication (print and non-print media) to the Agency for International Development and planners and practitioners from developed and developing countries. The project, which is operated by the Academy for Educational Development, focuses on development communication applications (especially those of radio) in the fields of agriculture, health, population, nutrition, and education, particularly when such media are used to reach a large audience.

REPORTING PERIOD

The second Annual Report covers the contract period September 1, 1985 through August 31, 1986.

ACTIVITIES

The following summarizes the activities undertaken by the Clearinghouse staff to fulfill the objectives of the contract.

I. Information Dissemination

A. Introduction

The Clearinghouse on Development Communication serves a clientele which includes AID staff in central offices, regional bureaus, and missions; professionals and decisionmakers in the Third World; academics and researchers; PVOs; and other international donor agencies. The Clearinghouse disseminates relevant and helpful information to those concerned with effective development in a variety of ways.

The contract details such methods. They include the maintenance and expansion of a library/reference service, the publication of a quarterly newsletter (Development Communication Report), the production of Project Profiles, the production of states-of-the-art and other special reports, and the conducting of individualized searches. The Clearinghouse has provided these services during the second year of the current contract, as detailed below.

B. Clearinghouse Outreach Services

I. Development Communication Report

The Clearinghouse's quarterly newsletter, Development Communication Report (DCR), has, since 1977, regularly provided a specialized audience of some 5,000 readers with information on the uses of various communication technologies in community development, agriculture, education, health, population, and nutrition projects.

Over the contract year, the Clearinghouse published five issues of DCR. DCR #50 was distributed at the beginning of the first quarter. With the help of a graphic artist, a new masthead and revised format were developed and first used in DCR #51, a special health issue, which was printed and distributed in the second quarter; 1800 copies of this issue were distributed beyond the regular subscription mailing, including those made available at the ICORT II Conference; a special supplement for USAID Missions focusing on AID child survival programs was designed for insertion in this issue. DCR #52, which also came out the second quarter, included the 1986 Clearinghouse calendar insert. DCR #53 was distributed in the third quarter and contained a special section on video use in developing countries for which Diana Talbert served as Contributing Editor. Late in the fourth quarter, DCR #54, which includes a four-page subject index covering issues 40-54, was prepared and distributed. DCR #55 was planned during the fourth quarter, and it will be a special issue devoted to innovative print materials, including comic books, photonovels, poster and pamphlet development, and newspapers; the issue will also include a 1987 calendar. (See attached)

In order to increase the number of paying DCR subscribers, the Clearinghouse undertook a marketing effort. This consisted of sending announcements to 24 health publications of the availability of complimentary copies of DCR #51 (the special health issue); to 49 education publications of the availability of complimentary copies of DCR #49 (the

special radio issue); and announcements were sent to over 200 communication and agriculture organizations and publications offering a complimentary copy of DCR. When a reader of one of these publications requests a complimentary copy, a subscription form is also sent. Since the effort began in the second quarter, there have 426 requests for DCR #51 and sixteen have subscribed to DCR, and there have been 28 requests for DCR #49. (See attached)

Over the past year, DCR had 1,004 new paid and no-charge subscribers and 270 deletions. (See attached)

As part of its cost-reduction strategy, the Clearinghouse is leasing a Leading Edge computer, which will, among other things, allow in-house maintenance and printing of the DCR's mailing list.

2. Project Profiles

Project Profiles are brief case studies of development projects throughout the world that use communication technologies to promote development in the sectors of agriculture, education and human resource development, integrated development, health, nutrition, and population.

The Clearinghouse printed six Project Profiles this past year (see attached). These include:

- **Achikumbi Program**, Malawi, whose objective is to demonstrate better agricultural practices to individual groups of farmers by using mass media programs.
- **Developing Countries Farm Radio Network**, Canada, whose objective is to increase food supplies and improve the health/nutrition of subsistence farmers and their families by distributing radio scripts and cassette tapes to broadcasters.
- **Rural Health Program**, Nigeria, whose objective is to train village health workers who will return to their communities to promote preventive health care by using stories, drama, and songs.
- **National Control of Diarrheal Diseases Project: ORT Communication Campaign**, Egypt, whose objective is to educate Egyptian mothers with children under three about diarrheal disease, to promote the use of Oral Rehydration Therapy (ORT), and to subsequently lower the child mortality rate by primarily using television advertisements.

- **Project IMPACT**, Philippines, whose objective is to develop an effective and economical delivery system for mass primary education by using programmed instruction by older students and self-paced instruction in peer groups.
- **Speak Mandarin Campaign**, Singapore, whose objective is to replace Chinese dialects with Mandarin Chinese by using the press, radio, and television.

Eight recent Project Profiles were sent to USAID Mission personnel to be added to the Project Profiles binder, which now contains 108 Profiles. These included five of the above (less **Rural Health Program**, which was printed later), plus:

- **Family Planning Association of Hong Kong**, Hong Kong
- **Happy Baby Lottery**, The Gambia
- **The Radio Assisted Community Basic Education Project (RADECO)**, Dominican Republic

Currently, the following Profiles are being reviewed by their respective project contact people. They are:

- **Farm Broadcasting**, Nepal
- **Kheda Communication Project**, India
- **INADES-Formation**, correspondence agriculture course, Cameroon
- **Rural Audiotheques**, Mali
- **Rural Newspaper**, Honduras

Compilations of Project Profiles on agricultural communications and on radio-based projects were prepared, and an announcement in DCR makes them available to readers. (See attached)

3. Library/Reference Services

The Clearinghouse reference collection contains over 12,000 published and unpublished documents on communication theory and applications and on international development. The collection also includes non-print materials such as films, videotapes, slidetape productions, and audiocassettes. In response to about 50 requests for information each week, the Clearinghouse provides library, research, and referral services to practitioners in the field of development communication. Upon request, the Clearinghouse will prepare an information package, a process that might involve conducting a literature search, preparing copies of particularly relevant papers, compiling a bibliography, and providing the names of experts with particular qualifications in a given field.

Over the past contract year, the Clearinghouse kept its serials collection up-to-date by subscribing to several new periodicals. They are:

- **Advanced Technology Alert System**
- **Background Notes**
- **Bulletin of the International Bureau of Education**
- **Development International**
- **Educational Technology Abstracts**
- **Educational Technology Research**
- **Electronic Learning**
- **International Journal of Educational Development**
- **Journal of Distance Education**
- **Nutrition News**
- **OCIAC Update**
- **Open Learning**
- **Technology Journal**
- **Telecommunication Journal**
- **TechTrends**
- **Thai Development Newsletter**
- **World Development**

The Clearinghouse also increased its collection of books and xeroxed articles. Illustrative of those indexed are the following:

- **Agricultural Communication: The Role of the Media**
- **The Brazilian Telecommunication Industry**
- **Communication and Society**
- **Developing People's Literature with the Rural Folk**
- **Educational Technology: A Critical Perspective**
- **Formative Evaluation**
- **Implementing Programs of Human Development**
- **Information Services for Developing Countries**
- **A Micro Handbook for Small Libraries and Media Centers**
- **The MMHP Evaluation in the Gambia: Executive Summary**
- **New Approaches to Health**
- **Nuevos Medios**
- **Proceedings of ICORT**
- **Rural Educational Broadcast**
- **Satellites and Their Impact on the Environment**
- **Training of Personnel for Distance Education**
- **Women, Health, and Development**

The Clearinghouse received some 200 visitors over the past twelve months. They were oriented to the collection and assisted in identifying appropriate materials for their specific research needs. Some of these visitors included:

- **James Alleman** **Economist, International**
(U.S.) **Telecommunications**
Union

- Juliet Aphane
(Swaziland) Sr. Nutrition Officer,
Ministry of Agriculture
& Cooperatives,
Swaziland
- Elaine Arnold
(U.S.) Radio Nederland
- Junaidah Bajrai
(Singapore) Research Assistant,
Society for Nutrition
Education
- Juan Braun
(U.S.) Unicef
- Joyce Burton
(U.S.) Education Development
Officer, USAID
- James Echols
(U.S.) Private Consultant
- Susan Goodwin
(U.S.) Project Director,
Institute for Policy
Studies
- Daniel Henrich
(U.S.) Handclasp International
- Nedra Huggins-Williams
(U.S.) AID Desk Officer/
Somalia
- Veronica John
(U.S.) International Law
Institute
- Shahnaz Kapadia
(Pakistan) Mgmt. Training Assoc.,
AED, Pakistan
- Dr. Lachman Khurchandani
(India) Center for
Communication
Studies, India
- Rashmi Luthra
(India) Doctoral Student, Univ.
of Wisconsin/Madison
- Sidney Moore and
Richard Gilluly (U.S.) Writer and Research
Assistant, Population
Information Program

- Galal el Rashidi (Egypt) Director, I.E.C. Centre
- Joan Romeo (U.S.) Clearinghouse on Audiovisual Resources
- Diane de Terra (U.S.) Consultant, Institute for Development Anthro.
- Florida Traub (Liberia) Project Director, Liberia Rural Communications Network
- Leonel Valdivia (U.S.) Development Associates
- Mary Whittington (U.S.) Researcher, Bonnie Cain & Associates

Information requests from AID/Washington and USAID Missions personnel were received throughout the year. A sampling of responses included:

- USAID/Ouagadougou: information on rural radio for health education
- USAID/New Delhi: information on radio broadcasting for development and for S&T/ED radio education package
- USAID/Kigali: information on radio message delivery in family planning and other areas
- Duncan Miller, REDSO/WA, USAID/Abidjan: Project Profiles in French and English
- Frank Fairchild, USAID/Guatemala: a list of selected adult education equivalency projects
- USAID/Belmopan: DCR subscription, films, and Project Profiles
- USAID/Cairo: five agricultural communication packages
- USAID/Yaounde: one agricultural communication package
- USAID/Kinshasha: DCR #51 and HealthCom information
- USAID/Bujumbura, ANE/TR/HPN, USAID/Lima, USAID/Belmopan, USAID/Mbabane, AFR/TR/HPN, USAID/Islamabad, USAID/Manila, USAID/Panama City, USAID/Accra, S&T/H, USAID/Guatemala City, USAID/Cairo, USAID/Rabat, USAID/Dakar, USAID/Yaounde, and AID/Amman: Project Profiles binder and previously published Profiles

4. Radio Education Activities

The Clearinghouse's contract calls for emphasis on instructional radio in its deliverables and overall orientation. Several steps were taken toward this objective:

- The Clearinghouse provided the Radio Learning Project with names for a network mailing list.
- The Radio Education package was sent to education specialists who attended the Moton Conference on Education for Developing Countries, and to others in the field of education, as specified by the Project Monitor and S&T/ED personnel.
- The Clearinghouse Director participated in the RADECO project's International Conference on Radio Basic Education in Santo Domingo, December 2-8, 1985.
- The Clearinghouse reproduced videos of the Radio Math, RADECO, and RLAP projects for the Radio Learning Project, and reproduced various scripts and corresponding cassette recordings of RLAP lessons for tests and demonstrations in Swaziland.
- The Clearinghouse participated in a meeting with Jim Hoxeng, RADECO Project Monitor, and Beatrice Andrews of InterAmerica, to discuss Jamesine Friend's contributions to the writing of the Interactive Radio Instruction Handbook.
- The RLAP film was shown at the annual Washington Chapter SID meeting's film festival.
- The RLAP film was sent to Zimbabwe for Unesco's annual African meeting on innovations in education.
- All of the Radio Math audio cassettes were duplicated for Jose Vicente Alvarez and Jose Ros of the Guatemala Non-formal Education Radio Project.
- Judy Brace and Jim Hoxeng's article on the RADECO project appeared in Front Lines.
- The Clearinghouse received three shipments of reel-to-reel lesson tapes from the RADECO Project in the Dominican Republic. These tapes are being stored in the Clearinghouse collection as required by contract.
- Writing and revision was ongoing for the Interactive Radio Education Handbook modules, and Edgerton's revision of de Fossard's scriptwriting module was received.

- Scripts and broadcast and classroom tapes of RLAP were reviewed to make a selection of a variety of pupil responses for an illustrative audio tape.

5. Special Reports

As called for by the contract, the Clearinghouse delivered several Special Reports on educational developments and applications. Those approved during the second contract year were the following:

- Text boards and photos of S&T/ED projects/activities were hung in the S&T/ED offices in Rosslyn at the end of the first quarter.
- A set of graphics entitled, "Strategies for Planning Effective Educational Development" (SPEED), was prepared for a presentation by Gary Theisen at the World Bank in the first quarter.
- Funding figures indicating AID's support to education were compiled for David Sprague during the third quarter. (See attached)

To date, the Clearinghouse has prepared six Special Reports.

6. Clipping Service

The Clipping Service, which provided a selection of xeroxed periodical articles for circulation in S&T/ED, was replaced by selected periodicals placed in the Reading Room for a month's rotation.

7. Reading Room at S&T/ED

During the last quarter of the contract year, because of space pressure, the AID/Development Communication Reading Room was closed down, and a display rack was set up in the S&T/ED reception area to be stocked monthly with CDC publications and current selected publications.

8. Interns

The Clearinghouse has, for many years, offered students from universities interested in international studies the opportunity to get first-hand experience working in an international development organization (under the aegis of the Academy for Educational Development) through internships. Such internships expose the intern to a wide cross-section of development issues and practical development strategies, as well as assisting the functions of the Clearinghouse. For several months this past year, Sujit CanagaRetna, from Bennington College in Vermont, and Christine Shields, who attends Manhattan College in New York, worked in the Clearinghouse on various tasks. These included indexing the new, more significant publications on development communication for the CDC collection; assisting in responding to information requests; working with the DCR's editor to enter copy into the word processor and proof copy; compiling mailing lists of appropriate organizations and periodicals for the DCR outreach activity to increase paid subscriptions; and soliciting information for Project Profiles.

C. **Conclusion**

In summary, the Clearinghouse has worked toward realizing the objectives of the contract by expanding its information outreach, providing a forum for S&T/ED activity -- especially for Interactive Radio Instruction -- and reinforcing an increasing commitment to development communication on the part of development professionals throughout the world.

II. Administrative Services

A. **Reports**

1. Quarterly Reports

Four Quarterly Reports were submitted to the Project Monitor during the past contract year, each summarizing the activities for that particular three-month period. These are contract deliverables. (See attached)

2. Semi-annual Workplans

Six-month Workplans were drawn up in February and August, outlining the proposed activities to be undertaken by the Clearinghouse in conjunction with its contract. These, too, are contract deliverables. (See attached)

B. Meetings

Meetings to discuss Clearinghouse activities and deliverables with the Project Monitor were held in October, January, February, March, May, July, and August. (See attached)

C. Reading File

Since the beginning of the contract, monthly reading files have been compiled to keep the AID Project Monitor informed of visitors to the Clearinghouse and significant requests for information and the responses provided. These are circulated to S&T/ED and returned to the Clearinghouse files.

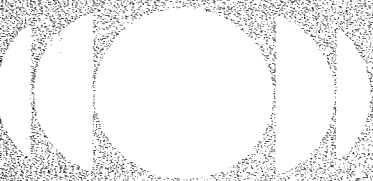
D. Personnel

The Clearinghouse hired Anne Kreutz on a part-time basis to work on the preparation of Project Profiles. She was with the Clearinghouse during the first and second quarters of the contract year, after which she became a Peace Corps Volunteer in Niger.

ATTACHMENTS TO THE CLEARINGHOUSE SECOND ANNUAL REPORT

Enclosed with the Second Annual Report is one copy each of the following items:

- Issue numbers 50 through 54 of DCP.
- Announcements that were sent to organizations and publications offering a complimentary copy of DCR
- Graph of DCR subscriptions
- Six Project Profiles
- Copies of Selected Project Profiles: Radio and Selected Project Profiles: Agricultural Communication
- Three Special Reports
- Four Quarterly Reports and approvals
- Two Six-month Workplans and approvals
- Agendas for monthly meetings between CDC staff and the Project Monitor



Communications Strategies for Agriculture: Hybrids of a Different Kind

by William Smith and Howard Ray



Two decades of experimentation have enriched our understanding of how to organize and use communication to support agricultural development in a wide range of settings and conditions. Many of the old principles of good communication have proven true, others have been expanded and made even more effective. Particular projects, like the Basic Village Education project in Guatemala and the Masagana 99 project in the Philippines, have demonstrated to us how ideas borrowed from fields such as advertising and marketing can be effectively added to large scale programs of agricultural development. The key change has been a shift away from media-specific planning, toward a systems approach to communication, which uses radio, print, and other channels as part of an interrelated network of inputs targeted at specific changes and driven by a farmer orientation.

These three elements—a farmer orientation, targeted change, and an integrated media network are the fundamental organizing principles around a growing set of hybrid communication strategies.

Farmer Orientation

The farmer is not a receptacle into which new agricultural technologies are poured, but an active catalyst whose needs, constraints, attitudes, and vocabulary orient and drive the communication component. Communication is not a link to the farmer, it is a link between the farmer, researcher, planner, and extensionist.

Our tools for understanding the farmer's perspective are growing. Our dependence on formal survey research and anecdotal information is giving way to smaller, behavioral studies. Concept testing, focus group interviews, behavioral trials, and intercept interviews are specialized names for a new genre of sound village research techniques. These behavioral studies help to identify hidden constraints a farmer may encounter in trying a new innovation, and to help understand less visible incentives which inhibit or promote adoption. They help us select

vocabulary which the farmer will understand, and integrate the new innovation into the farmer's own view of his problems and needs. They help us ask not only "How good is the new idea?" but "How good will the farmer think the new idea is?"

We know for example that there are five basic reasons why any new idea might not be accepted: (1) a farmer may not have the skills or knowledge to use it; (2) he may not have the tools or materials to apply it; (3) he may see no benefit from using the new idea; (4) he may receive benefit from doing something quite different; or (5) he may perceive the new idea not only as having no benefit, but as punishing in some way—more work, more costly, less status, etc.

Traditionally, the job of agricultural communication has been to motivate the farmer to "want" to use a new idea and then to teach him the skills or knowledge to apply it. Behavioral studies help us explore what "want" really means and to help determine how to best teach the new skills. What benefits will the farmer experience? How can we describe the relative costs and benefits to the farmer in the most

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A Health Campaign in Zaire

by Iain McLellan



In the central African country of Zaire a government department, several international aid organizations, and church-sponsored groups have coordinated their development support communications (DSC) campaigns to better disseminate health information. This interorganizational cooperation will enable participating groups to learn from each others' experiences in DSC, and to avoid costly duplication efforts.

Santé pour Tous, the nucleus of this coordinated effort, is a primary health care and preventive medicine project that is sponsored by Zaire's Department of Health, and the U.S. Agency for International Development (A.I.D.), and administered by *l'Eglise du Christ du Zaire*.

In addition to its main focus—improved primary health care—under the umbrella of *Santé pour Tous* is a vaccination campaign, a family planning project, and a nutrition and agricultural promotion project. Each has a different organizational structure and separate funding sources, but to facilitate coordination of DSC activities, representatives from these organizations sit on each others' boards.

Santé pour Tous centers are located in 50 rural health zones across Zaire. Each health zone has a central hospital and field office. These offices are equipped with battery-powered film and slide projectors used to train nurses, birth attendants, and village health workers in primary health care and DSC techniques.

Sharing Communication Materials

These same materials are also used by the other organizations participating in the *Santé pour Tous* project for their village-based DSC activities. Additionally, Community Development Committees, comprised of health professionals and village leaders have been established in many rural health zone villages to coordinate campaigns and projects at the local level. A village committee first decides upon a health issue that concerns village residents, then they

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persuasive way possible? What costs will the farmer pay for giving up what he is already doing?

While these questions seem, and in fact are, simple, they are rarely asked in a systematic way. Our focus has often been on the innovation rather than on the farmer. We describe the benefit of a new seed variety or new pesticide from our perspective ignoring costs, often of a social nature, which the farmer considers too high.

A second major area of improvement has been our recognition that all farmers are not alike. Our mass media broadcasts have tended to lump farmers together, focusing more on their similarities than on their differences. We have too often allowed our view of mass media as a big audience medium to dictate what we say and to whom we address our messages. But we now know how to segment broadcasts and direct them to special farmer groups. We can develop differentiated message strategies for different groups of farmers and can use techniques such as message tone, characterization, and scheduling to reach important subgroups with more relevant and persuasive information.

Targeted Change

The second basic principle which is changing our view of agricultural communication is a focus on selecting and assigning a priority to the content of agricultural messages; targeting areas of opportunity rather than using a hit-or-miss approach to information diffusion. Concretely we know that effective agricultural communication is responsive to seasonal variation in the farmer's needs.

We also know that for a new behavior to become routine, people need to do it many times, to get support from several places, and to have the support (or reward) as close to the new behavior as possible. This presents a real problem in agriculture. A new seed variety doesn't yield its better results for weeks, or even months. The reward in improved yields is affected by many things outside the control of the seed developer or the farmer. Drought, flooding, unexpected rises in fertilizer costs, and a lack of credit can obliterate the most carefully applied new practice. We have also learned that disseminating simple media messages about the wonders of a new seed variety will produce only frustrated and incredulous farmers. Clearly, the messages we decide to present must be analyzed from this perspective and carefully selected to ensure that observable outcomes are perceived as rewarding for the farmer. This means planning a comprehensive communication strategy which helps the farmer deal with seasonal problems as they are encountered. Farming is not like taking medicine—you do not get better after taking two tablets. It is an integrated and cumulative process which is necessarily reactive to unpredictable events. But we cannot teach everything at once, so we must carefully decide what is needed now and focus on that advice as a primary target.

Media Network

Finally, no single media channel is powerful enough to accomplish the job. Dozens of studies were carried out in the 1950s and 1960s to determine "What is better—radio, TV, print, or the extensionist?" The answer is now clear. "What is better?" is the wrong question. The right question is "What is better for what purpose?" And some clear answers are emerging.

Broadcast media is better at reaching a lot of people quickly with fairly simple ideas. Print media is best at providing a timely reminder of information we cannot expect someone to remember without reinforcement. And, interpersonal communication, including extensionists, group meetings, community organization, and demonstrations, are clearly the best way to teach and develop credibility.

Perhaps a more important finding is that we need all three of these components to make an effective program. We need to reach many people quickly; they have to have some reminder of what we have told them; and they have to believe in us if they are going to take our advice. Effective communication is like a three-legged stool. If you are missing one leg you have an unstable foundation.

... we need a specific systematic way of ensuring that our priority messages . . . are going to interact with each other to promote change."

A new set of questions has resulted from these findings. How do we best orchestrate various inputs to maximize their impact and minimize our costs? We cannot use all channels all the time, because using all channels would be too expensive. We have to carefully select elements from each of the media groups and then integrate them so that they multiply the importance of each other.

We need what communication specialists call a channel strategy. Channel strategies are situation specific. They grow from an understanding of a particular country, a particular program, and a particular audience. They are based upon preprogram research into questions like: "Who listens to what?" "Who reads?" "What are the costs of each media channel?" "How complicated is the advice we have to give?" "How accustomed to and/or tired of radio or print messages, is our audience?" "Whom does our audience trust for advice on a given topic?" and many others.

Suppose we have a country where farmers do not read very well; indeed, they are not used to printed instructions of any kind. We want to tell farmers that there is a pest problem, and that we have a pesticide solution. We want to teach them to mix the new solution—and it is very important that they mix it in exactly the right amount

water and apply it at the right time. Our extension network is spread too thin, they simply cannot reach enough farmers in time to control the pest problem. A communication strategy is put together in which a simple printed flyer with the mixing instructions is designed and distributed in large numbers to local stores, extensionists, and other field workers. First, we use short radio broadcasts (spot announcements) to tell farmers we have a pest problem, a pesticide solution, and that the flyer is available at local stores. At the same time, extensionists are training small groups of farmers dispersed throughout the region, in how to mix and use the solution. Each trained farmer receives a colorful flag to fly over his house as an identifying marker that he is one of the "expert mixers" of the new pesticide. A second set of radio programs not only tells farmers how to mix the pesticide properly, but informs them that the "flag farmers" in their community have been trained and are sources of advice on how to apply the pesticide properly. Each "flag farmer" is given dozens of the flyers to distribute to neighboring farmers as reminders of how to mix and apply the pesticide. Special radio programs are produced to teach farmers in isolated areas how to use the flyer, and to remind them of what they have learned from their neighbors.

This simple example illustrates how each of the media channels—print, radio, and interpersonal interact cumulatively. It is drawn from a concrete experience in West Africa. The Ministry of Health of The Gambia wanted to popularize a new medicine for diarrhea, and within a five-week period managed to teach almost 60 percent of the women in the country to prepare and give the new medicine using the approach described above.

Many agricultural problems are more complicated and long term than our pesticide example. Other channel strategies would be necessary and are possible. The key new insight is that we even need a channel strategy—a specific, systematic way of ensuring that our priority messages, directed at selected audiences, are going to interact with each other to promote change.

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Development Communication Report, published quarterly by the Clearinghouse on Development Communication, has a circulation of over 6,000. Subscriptions are available free of charge to readers in the developing world.

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Academy for Educational Development, a nonprofit planning organization, and supported by the Bureau for Science and Technology of the U.S. Agency for International Development as part of its program in educational technology and development communication.

The views expressed in *Development Communication Report* are those of the authors and not necessarily those of its sponsors. Original material in the *Report* may be reproduced without prior permission provided that full credit is given and that two copies of the reprint are sent to the Editor.

Readers are invited to submit typed manuscripts of no more than 1000 words, and to send in photographs.

Radio and the Educational Needs of Africa

by Alex T. Quarmyne

The following is an abridged version of a speech presented at the "New Directions for Education by Radio" Conference held in Nairobi, Kenya, Sept. 23-28, 1984. This conference was jointly sponsored by the Ministry of Education, Science and Technology, Republic of Kenya, and the Office of Education, Bureau for Science and Technology, U.S. Agency for International Development. It represents A.I.D.'s continuing effort to disseminate the "interactive radio instruction" methodology applied in the Radio Language Arts Project in Kenya, Nicaragua, Thailand, and the Dominican Republic. (See the Spring issue of Development Communication Report.)

... the democratization and renovation of education [is needed] to enable all African children and adults to exercise fully their right to education."

This is the first priority need as defined by African Ministers of Education and economic planners as voiced at a conference held in Harare, Zimbabwe in 1982. Democratization of education rests principally on the spread and maintenance of its delivery system. The traditional mechanisms of education, mainly schools, are structurally incapable of carrying out this task of democratization. There is no African government that could build the classrooms, train the teachers, and provide the support required to educate all its young citizens, let alone its adults, and much less to a given measure of competence. Education of the scale and the type required by Africa cannot be accomplished through and in the classroom alone.

A Tool for Democratization and Renovation

Radio is one of Africa's great wasted resources. It was enthusiastically hailed by African governments at independence as a powerful instrument for education both in its broadest and more limited sense.

It was the perfect medium for an impoverished, disadvantaged continent. It could instantaneously and simultaneously reach geographically dispersed populations. It did not require literacy of the receiver—nor even of the sender.

National development plans have consistently provided for improvement of the broadcasting transmission infrastructure. Most African countries are today able to distribute radio programs to over 90% of their populations and at least seven countries have 100% radio coverage.

A total solution to the once most difficult problem of reception facilities is now within our reach. Although in many African countries the unreliable supply of batteries still limits the potential number of working receivers, even this shortcoming is soon expected to be overcome with the introduction of solar-powered radio receivers.

Radio in Africa can thus be said in practical terms to be a high-access medium from the point of view both of distribution and reception. No other medium, channel, or technology offers so feasible a promise for the democratization of education. Apart from individual capacity for learning, nothing need constrain the radio listener from benefitting from an educational program—not age, not sex, not the lack of certificates or transport or clean clothes, and all the other barriers that effectively select who may benefit from traditional modes of education.

As Wilbur Schramm points out and today we are able to concede:

"... of course students can learn effectively from the media, from ANY medium ... and what the media can do, they can do as well as a classroom teacher, sometimes better."

Certainly, we cannot afford not to heed common sense or to listen to reason. A question often raised is that of cost-effectiveness. It is relatively simple and straightforward to apply the criterion of cost-effectiveness to situations in industry. In education, however, it is not that straightforward; and in considerations leading to the choice of one communication medium over others for educational application, it is even more complex.

From the results of many educational radio projects around the world and other studies, it is now generally accepted that, particularly in situations such as we have in Africa where educational radio does not imply the creation of separate networks of production and transmission facilities, much higher cost-effectiveness over traditional classroom teaching can be guaranteed. It is also clearly established that the cost-effectiveness of radio in education can be as high as five times that of television.

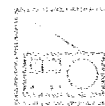
Here then is a wonderful scenario for radio as the ultimate tool for the democratization and renovation of education in Africa. The only thing missing is the action. To say that there has been no action may appear not to do justice to the work of the hundreds of men and women who have over the years worked with dedication in some form of educational broadcasting. They would be the first to lament with me, however, that their efforts have not led anywhere near democratizing and renovating education.

Going through a list of some 23 projects which have been labeled as educational radio projects in Africa over the past two decades, there are only five which I am able to identify as having successfully fulfilled their objectives or as being in the process of doing so. Five out of 23 is certainly not an impressive score.

A Few Success Stories

There was a time when the popular belief was that as an instructional tool, radio as a stand-alone system was a poor performer. However,

Do You Have a Radio Question?



The Spring issue of DCR was devoted to a state-of-the-art review of "interactive radio"—an instructional design applied to radio to improve education in developing countries. If you have any questions about this new methodology or how it might be adapted to your country's educational needs, we encourage you to send them to us. Starting with the Fall issue, our radio experts stand ready to respond to your queries. Direct your questions to:

"Radio Question"
Clearinghouse on Development
Communication
1255 23rd Street, N.W.
Washington, D.C. 20037
U.S.A.

there have been successful attempts to counter this argument. Among them, Tanzania where educational radio was part of a focused national campaign supported by a strong political organization. Another was in Mauritius, where the Mauritius College of the Air successfully used radio, TV, and correspondence material in its educational programming. Again, this was a product of the highest level of national commitment. Both also exemplified involvement at the grassroots and operational levels from the beginning, and were supported by formative research.

Today, in the light of dwindling human and financial resources in most of Africa, the use of educational radio as a stand-alone system seems to present a feasible strategy. The use of radio as a stand-alone system, however, requires creative compensation for interpersonal and other support inputs. Such compensation must necessarily be based on sound pedagogical principles. It therefore demands the most intimate collaboration between broadcasters, stretching their craft to the limit, and educators, testing the validity of their teaching skills. This is what the Language Arts Project in Kenya has so impressively demonstrated.

Our experiences with the few truly successful projects we have had so far tend to indicate that it is not only a particular type of approach which works. One major feature which is common to all successful projects is the use of specialists, who employed sound educational and communication research techniques for the design of the projects, for the development of the programs, and for the assessment of their effectiveness.

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(Radio continued from page 3)

We have also discovered that for a project to succeed, it does not have to be of any particular type. Classification of types of educational radio programs is often done for the purpose of facilitating analyses, but has never been seen to be a success-determining factor.

All we are able to identify at this time is the role that should be played by educational and communication research during the planning of the project, the development of the broadcast program (through formative research), and the use of summative research tools to measure effectiveness.

But are these findings really new? I submit that they are not. They have been with us and demonstrated to us many times over. We now have all the answers.

Why the Failure of Radio in Education?

Strictly speaking, educational radio in Africa cannot be said to have failed. The fact is, there has been very little serious educational radio effort in Africa. There have been and are a number of educational radio projects and programs, but many have been short-lived, short-sighted or both. Often they have been mere reproductions of the traditional classroom formats. In no way could these be said to be contributing to the democratization and renovation of education. A number of other projects have been planned and executed purely as experiments or research ventures. Nevertheless, there are a multitude of reports of countless seminars with the ever-present title "The Role of Broadcasting in Education" which assert that educational radio has failed because of budgetary constraints on program production, the lack of listening facilities, or the shortage of trained personnel. Year after year, this same list of "problems" surfaces and nothing ever seems to be an adequate solution—not the use of low-cost portable production equipment, not the provision by government of free receivers, not even the increase in the number of communication graduates.

"The use of radio as a stand-alone system . . . requires creative compensation for interpersonal and other support inputs."

All one has to do is to listen to any program labeled "educational" on any African radio service and to reflect on the teaching and learning processes, and one is bound to come to the conclusion that we are not only stagnating but probably actually retrogressing. In most cases you are even lucky if you find a program you can actually listen to.

Where attempts might have been made to use radio seriously for education, these have been undercut by the entry of its more glamorous sibling, television. Following patterns established elsewhere, both educators and broadcasters in Africa started looking to television for solu-

tions to educational problems. These were of course not practicable as the Ivory Coast experience has so painfully finally driven home to us. But the magic of television lingers on, to the disadvantage of radio. As one African Director of Broadcasting put it, "I am not yet able to run radio and they are asking me to submit proposals for television."

The Task Ahead

Radio has been proposed in the discussion as the optimum medium or technology to achieve the dual goals of educational democratization and renovation in Africa. But is educational radio in Africa in its present form ready to accept this challenge? My answer is no. There are obviously more fundamental reasons for our failures than those we have traditionally presented at the many conferences and seminars. I would like to submit two of these reasons for your consideration at this conference.

The first problem is with the human factor—the educator and the broadcaster. The educator will not give an inch from his arena of classroom teaching to facilitate wider learning; the broadcaster will not share the mystique of the craft to put it to substantive use. Each displays a degree of inflexibility which suggests a lack of understanding of the purposes of his or her individual discipline, however he or she may have mastered its form.

We require a renovation of the broadcaster and the educator themselves. From the broadcaster we require a commitment to, and a change of attitude towards education. Similarly, from the educator, we require a commitment to, and a change of attitude towards radio.

Secondly, we require democratization of radio itself. Democratization of educational radio will require the decentralization of production and transmission facilities. It will require opportunities for citizens to have closer access to the program-building machinery and to help ensure that programming reflects their concerns and their communities' educational needs.

Unfortunately, in this regard our continent still has a major problem. The truth is that most of the time broadcasters themselves do not study educational radio, its potential and its implications adequately enough to be able to make convincing proposals to their governments.

The underutilization of radio to date would seem finally to indicate that we have allowed ourselves to be awed by its potential. But let us remember that in the same manner that we have so far limited this potential, we also have it within our power to harness it to our ends. To continue to steer the now-familiar old course and attempt piecemeal remedies along the way will never get us there. Africa has not yet truly discovered educational radio. Let this be the start of that discovery. ■

Alex T. Quarmyne is the Unesco Chief Technical Adviser at the Zimbabwe Institute of Mass Communication, Harare, Zimbabwe.

Low-Cost Collapsible Sound Studio

The Clearinghouse recently received an interesting set of plans for a low-cost collapsible sound studio. It was originally designed for Mahaweli Community Radio in Sri Lanka which needed a sound-proof portable cubicle that could later be moved to a permanent site. This 2.1 x 3.6 meter studio can easily be dismantled and transported. The total cost, using locally available materials wherever possible, was US\$1200, (excluding air conditioner).

For a free copy of the complete construction plans, request "A Low-Cost Collapsible Sound Studio," Broadcasting and Rural Development Working Paper No. 2 from: Unesco Consultant, Mahaweli Community Radio, Gampola Road, Peradeniya, Sri Lanka.

Rural Reconstruction Training Courses Offered

The International Institute of Rural Reconstruction, Silang, Cavite, Philippines, announces its schedule of International Training courses to be conducted during 1985 and 1986. Courses are designed for Third World nationals who are currently working in either middle- or senior-level management positions with rural development organizations in the Third World.

Applicants must have at least three years of experience in rural development work and a related academic background. They must be formally nominated by their organization, and must be in good health to stand the rigors of an intensive course which includes living and working in rural communities. Courses offered are:

Advanced Course in Rural Reconstruction, Oct. 14-Nov. 23, 1985 and Feb. 10-March 21, 1986

This six-week certificate course for middle-level managers places particular emphasis upon rural reconstruction implementation strategies in order to enhance attitudes, skills, and knowledge that prepare participants to become more efficient, effective, and committed managers of development programs.

Senior Manager's Seminar, Nov. 3-18, 1986

This is a four-week certificate course to provide a forum for sharing and analysis of current rural development practices which will increase awareness of, and capability to deal with changing realities and emerging issues in the Third World today. Major emphasis is on participant sharing, rural development issues and strategies, critical areas, and program planning and evaluation.

For further details contact: Director, Training Division, IIRR, Silang, Cavite, Philippines 2720 or Vice President, U.S. Office, IIRR, 1775 Broadway, New York, N.Y. 10019, U.S.A.

Commercial Cinema: A Medium for Development Communication

by John Riber and Steven Smith



Commercial cinema, with its well-established distribution network of cinema halls in many developing countries offers an exciting opportunity to present potentially sensitive development issues. In Bangladesh, the commercial cinema is very popular. The country's thriving film industry annually produces about 40 feature films which are distributed to more than 250 cinema halls across the country. Historically, cinema in Bangladesh has been strictly an entertainment medium, sharing a tradition with the Indian film industry. The formula film dominates—overflowing with melodrama, heroes, heroines, villains, and extravagant love song-and-dance routines. As in other countries, cinema in Bangladesh transcends the boundaries of local social mores, and even the poorest villagers can escape into a world where events occur that would not be tolerated in real life.

In 1982, Worldview International Foundation (WIF), an international voluntary organization whose activities focus on practical participation in the information process, established a media center in Dhaka, Bangladesh in order to use the film medium to disseminate development messages.

WIF first worked with the Ministry of Education (MOE) to promote literacy. They collaborated in making a short film, *It is Dawn; Open the Door (Bhor Holo, Dor Kolo)*, for cinema hall viewing. To ensure that the literacy film had the same appeal as the feature attraction it would precede, entertainment was fully integrated into the production. Following the typical commercial film formula, a love story, with dancing, singing, and fighting, paralleled the developing social message—that those who achieve literacy will be rewarded.

Social Marketing in Films

Using the social marketing approach to promote a development theme, the producers were able to plug into a commercially successful network that assured them of reaching a large, attentive audience for a very low cost. An estimated eight million Bangladeshis have seen this literacy film in cinema halls, mobile film projection vans, and on TV. Evaluation of the project showed that 95 percent of the surveyed audience enjoyed the film and understood the intended message. Furthermore, the film was so popular that it was submitted as the Bangladesh entry at an international film festival in Moscow.

WIF's next project was considerably more challenging. Population Services International asked WIF to produce another film, for the Social Marketing Project (an A.I.D.-funded family planning communication project), this time with a family planning theme as the social development message. Although family planning is not

encouraged in this Islamic nation, by using the commercial cinema medium where sexual themes are commonly featured, the possibility of introducing the controversial topic of family planning could even add to the film's popularity.

The script was developed from research conducted by Manoff International Inc., an American social marketing agency who worked closely with MRCB, a Bangladeshi market research agency. They identified the target audiences and the constraints against using contraceptive methods in Bangladesh. Then messages were designed to address these issues. One constraint was the hesitancy of husbands and wives to discuss family planning with each other. Research suggested that contraceptive methods might be used more frequently if this constraint could be overcome, so the decision was made to use this issue as the film's theme.

A love story entitled *Together (Amra Dujon)*, was developed. The social message revolves around a newlywed couple; both are hesitant to immediately start a family, but neither feels comfortable discussing his/her feelings on the subject with the other because of strong cultural taboos against such a delay. As the story develops, the barriers are surmounted and this "model couple" begins to discuss the issue—using singing and dancing to express their concerns about family planning. Although the contraceptive method they have selected is not revealed (this would not be accepted even in a commercial film), it is made clear they are resolved to practice family planning.

Meanwhile, a parallel plot develops as a villain, an evil moneylender who resents this marriage because of his own desire for the heroine, interprets the couple's failure to produce a child as impotency on the part of the hero. The villain's continued pursuit of the heroine leads to action-packed fighting, a house burning, and ultimately to his comical humiliation; all key ingredients of a traditionally successful Bangladeshi commercial film.

Understanding audience expectations in a commercial cinema context is the key to successfully adapting this medium for social development messages. Although some foreign technical assistance was provided, the success of the two films described above depended on how their themes were adapted to the traditional feature film format. Alamgir Kabir, a leading film director in Bangladesh selected popular stars for the films, and in keeping with expected, though seemingly conflicting messages, dressed the village heroine in elegant clothing and jewelry. This reinforced her role as the stereotypical heroine of the film.

Viewers in developed countries who have been exposed to documentary films can appreciate them as a medium for learning. In developing countries, on the other hand, few people are exposed to the documentary film format. Movie-goers have paid their hard-earned money to be entertained, not educated. For this reason, a documentary-type film, lacking the escape and excitement viewers expect will not succeed in a commercial environment.

To date, commercial cinema has been an underutilized medium for development messages. WIF's experiences demonstrate how effective, well-conceived social messages can be presented in a commercial cinema context. It is

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Standard commercial cinema filming techniques are used to produce movies with social messages in Bangladesh.

(Cinema continued from page 5)

hoped this will encourage others to use this widely available channel of mass communication to disseminate other social messages. ■

Amra Dujon is a 30-minute Bengali-language color film available with or without English subtitles in 16mm film, or video: 1/2" Beta or VHS, or 3/4" Umatic from DSR, Inc., Box 281, Columbia, Maryland 21045, U.S.A. Information about *It is Dawn, Open the Door* is also available from DSR, Inc.

John Riber is an independent filmmaker working with Environment-Conservation Media Services, Madras, India. He established and administered the Video Media Center in Dhaka, Bangladesh from 1982 to 1984.

Steven Smith is currently working with DSR, Inc., and as a consultant on Third World information, education, and communication projects.

Microcomputer Course Offered

A course on *Microcomputer Acquisition and Uses in Development*, to be held Oct. 12-Nov. 2, 1985 at the University of Minnesota, is now open for registration. This course will guide individuals through the process of acquiring, implementing, and managing a microcomputer system. The course is designed for developing country senior- and middle-level managers with administrative and planning responsibilities. Participants are assumed to have had no prior computer experience. The course cost is \$3000 per person, including lodging. For registration information contact: Fred Hofer, 405 Coffey Hall, Univ. of Minnesota, 1420 Eckles Ave., St. Paul, Minnesota 55108, U.S.A. Telex/TWX: 298421 UM COLAG. Phone: 612-373-0725.

Call for Papers

The International Communication Association (ICA) invites you to submit your proposal for a paper, program, special session, workshop, or tutorial for its 1986 Annual Conference to be held May 22-26, 1986 in Chicago, Illinois, U.S.A. ICA comprises eight divisions and some special interest groups representing a variety of focuses in communication. Proposals are due Nov. 1, 1985.

For submission guidelines and further information write to:
ICA Headquarters, P.O. Box 9589, Austin, Texas 78766, U.S.A.

On File at ERIC

by Barbara Minor

Documents on agriculture and health education in developing nations that have been recently entered in the ERIC (Educational Resources Information Center) files focus on agricultural extension service and basic education, agricultural marketing principles, and several facets of health education. All five of these documents are available in microfiche and four in paper copy from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22304, U.S.A. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping.

• Perraton, Hilary and others. *Basic Education and Agricultural Extension. Costs, Effects, and Alternatives. World Bank Staff Working Papers, Number 564.* 1983. 297 pp (ED240 253)

The five papers in this collection examine the methods, costs, and effects of traditional agricultural extension services and basic education and present three case studies illustrating different approaches to using mass media for rural education. The first paper reviews the literature on the effectiveness of agricultural extension, and reports that extension agents' studies of internal efficiency have been generally critical, while evaluators of external efficiency (mainly economists) show much more positive results. It is suggested that extension agents often have irrelevant evaluation criteria and economists generally overestimate the specific impact of extension services. The literature on the comparative value of mass media and traditional approaches is reviewed in the second paper, which emphasizes ways in which mass media have been used for agricultural extension and for basic education, ways in which mass media have been linked with group and individual study, and the costs of using mass media as compared with other approaches. The remaining three papers present case studies of mass media use by a government department, the Extension Aids Service of the Ministry of Agriculture of Malawi; a nongovernmental organization, INADES Formation, in West Africa; and a semigovernmental agency, the Lesotho Distance Teaching Center. Available from World Bank Publications, P.O. Box 37525, Washington, D.C. 20013, U.S.A. for US\$15.00; or from EDRS in microfiche only for 97 cents.

• *Agricultural Marketing Principles: A Training Manual. Training for Development. Manual No. T-31.* 1984. 157pp. (ED 251 698)

This module contains basic materials to enable the workshop facilitator to teach concepts in agricultural marketing to Peace Corps volunteers. Introductory materials include general suggestions for the facilitator, a checklist, and a suggested timetable for a two-week workshop. The course is organized by 11 concepts: needs assessment, market familiarization, basic terms

and concepts, marketing in action, the production-marketing-consumption system approach to agricultural commodities, characteristics of commodity systems, behavior of market participants, simulation of a marketing system, identification of alternatives in previously identified marketing situations, role of Peace Corps volunteers in agricultural marketing, and sharing resources and plans for action. The module provides objectives, teaching techniques, materials needed, suggestions to the facilitator, handouts, worksheets, and visual aids for each concept. Lectures are minimal; content is presented primarily through learning experiences. An appendix contains additional visual aids, a bibliography, and supporting materials. Available from EDRS in microfiche for 97 cents or in paper copy for \$12.65.

• *Health and Sanitation Lessons (Africa). Appropriate Technologies for Development. Reprint Series, Number 27.* 1978. 114 pp. (ED 243 818)

This book presents 43 health, nutrition, and sanitation lesson plans originally developed by Peace Corps volunteers in Niger and recently translated from French by Graeme Frelick for use in The Gambia. These lessons can be used in a variety of ways, in home visits, pre-/postnatal consultations, well-baby clinics, and primary schools. Unlike most traditional health lesson plans which emphasize the lecture method, these plans stimulate and encourage full client participation. Although designed in 1971 for Sahelian countries, these lessons can be adapted and modified, as appropriate, to serve as guides for health programs and materials development in other countries. Included are sections on antenatal care, childbirth, home visits, and maternal and child health clinic visits. Appendices provide sample recipes for weaning foods, a nutrition lexicon, and information about complementary proteins. Available from EDRS in microfiche for 97 cents or in paper copy for \$9.15.

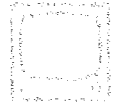
• *Community Health Education in Developing Countries. Appropriate Technologies for Development. Peace Corps Manual M-8.* 1978. 208pp. (ED 243 819)

This manual was developed by Peace Corps for those interested in promoting change to improve health conditions in their communities. Parts I and II focus on fundamental health education processes and discuss techniques and approaches for working with community members to plan and develop programs that are responsive to the community's expressed needs and goals. Part III presents another aspect of educational programs, that of transmitting information about health topics. This section includes specific reference materials on selected health topics relevant to developing countries, and it also discusses methods and aids for presenting such information to individuals or groups. Part IV deals with four common community health problems: nutrition, maternal and child health, control of communicable diseases, and accident

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Mass Media in Peru Promotes "Responsible Parenthood"

by Judy Brace and Reynaldo Pareja



Peru is currently embarked on a mass media campaign under the auspices of the Ministry of Health (MOH), to promote a variety of health-related activities to raise the level of consciousness and knowledge of low-income parents about family planning, immunization and oral rehydration. A joint effort between the Ministry, the U.S. Agency for International Development (A.I.D.), and a private advertising agency, has resulted in a series of TV spots, and a graphics package, grouped under the umbrella theme of "Responsible Parenthood," to encourage a thoughtful approach to the bearing and raising of children.

Because television spots are not as frequently used as radio spots for social service messages, our readers might be interested in the development of these spots.

The National Population Council (CNP) strongly advocated adoption of an overall theme of "Responsible Parenthood," and the MOH

Oral Rehydration Therapy Conference

The second International Conference on Oral Rehydration Therapy (ICORT II) will be held December 10-13, 1985, at the Hyatt Regency Washington in Washington, D.C. More than 90 countries are expected to be represented at this meeting, which will focus on implementing ORT programs, and report on the progress and new developments in ORT since the first conference in June 1983.

Topics for discussion at the conference include: communications and social marketing; distribution and logistics; health personnel training; supervision and monitoring; evaluation and cost issues; and integrating ORT with other health activities.

Simultaneous translation will be available in French, English, Spanish, and Arabic. There is no attendance fee.

The conference is sponsored by the U.S. Agency for International Development in cooperation with the International Centre for Diarrhoeal Disease Research/Bangladesh, the United Nations Children's Fund, the UNDP, the World Bank, and WHO.

For registration material please contact: Ms. Linda Ladislaus, ICORT II Conference Staff, Creative Associates, Inc., 3201 New Mexico Ave., N.W., Suite 270, Washington, D.C. 20016.

concluded. The elements that would be covered by this theme and reflect this responsibility would be family planning, oral rehydration, and immunization. That is, responsible parents decide on the number of children they can raise properly, they vaccinate their children, and they give oral rehydration solution to a child with diarrhea.

The mass media campaign activity was based on the results of fairly extensive audience research data that established knowledge and beliefs in the areas of family planning, immunization, and oral rehydration. With these data, message designers, working with a communications consultant, were able to develop media themes, test and correct them, and finally to air them.

Since responsible parenthood was to be the umbrella theme for all the spots, an introductory spot was designed to enunciate the components of responsible parenthood, and to establish a song and some recognizable phrases that would carry through to all the other spots. The elements of responsibility included adequate food, good education, health care, appropriate clothes, adequate housing, and much love. The overall song phrase adopted was "...loving and caring for the children that the couple decides to have."

The audience research identified two appropriate audiences at which to aim the family planning messages: those who want no more children and those who are using traditional contraceptive methods. For the first audience, TV spots were designed to reach 1) the woman, 2) the man, and 3) the couple. For the second audience, the spots were designed to reach the couple with an emphasis on either the male or female role. In each case the free services of the health centers were promoted.

The campaign was based on findings from both quantitative audience surveys and from focus group surveys. (In a focus group, six to 12 participants guided by a moderator, discuss topics relevant to the investigation underway. The participants are selected from representatives of the target audience on which the investigation is focused. Usually the findings from several groups are necessary for adequate research coverage.)

The Peruvian focus groups revealed information about contraceptive habits, male attitudes toward their wives' use of contraceptive methods, that there is a folk vocabulary for family planning activities (to incorporate into the spots to make them acceptable), that the quality of service given in the health centers conditions the continuing reliance on the center for future health services by its clients, and

finally that the most credible source of information about family planning services would be a mature female doctor, herself a mother. (A former radio actress, now a gynecologist, was found to take this media role.)

Pretest Adjustments

The creative design team of the advertising agency, with the information from these surveys, then developed TV storyboards (a series of sketches or photographs prepared during the planning of a film or videotape to illustrate the sequence of the visual information to be conveyed). Four versions were developed for the umbrella spot on responsible parenthood, and one was selected after informal pretesting, for presentation to the MOH and CNP. In addition, several storyboard versions were made for five other target area spots.

After presentation to the MOH and CNP, suggestions were incorporated into the storyboards, which were then translated into animatics (the photographing of drawings or sketches by a movie or video camera in such a way as to simulate movement, which, accompanied by a narrative, becomes a "draft" version of the film or video product being planned). The animatics were taken into the field for pretesting by a research group.

The results of the pretest were very useful in selecting the final approach to be taken. Without a pretest, major mistakes would have been made. For example, an animatic that showed men talking about the family planning aspect of responsible parenthood over a pool table was rejected by the pretest audience as representing too many negative factors. So the setting of this spot was changed. A combination of male and female voices giving the message was preferred to a male-only narration. Chance encounters, in the animatics, between neighbors or relatives that gave rise to discussions about family planning were interpreted to have hidden or clandestine meanings, and were dropped or altered to clarify the situations.

The TV spots used the visual image of rabbits to suggest uncontrolled reproduction, and the narrative reminded the viewer to "remember the rabbits"—that responsible parents do not have children in an uncontrolled manner.

It had been planned to use the TV spot's symbol of rabbits in the radio spots as well, until the pretest of the radio messages revealed that reference to rabbits, without the visual image of rabbits in the arms of narrators, was too harsh, and was rejected by the pretest audiences. This was a surprise to the message designers, who had assumed that production of radio spots was simply a matter of transferring the TV images to a radio format. The pretest showed a clear distinction between the two media, requiring separate and unique content.

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A Communicator's Checklist

1 **World Communications: A Handbook** by George Gerbner and Marsha Siefert (editors), (New York: Longman, 1984) 527pp.

This book is the result of an international conference on New World Information/Communication Order (NWICO) issues held in May 1980. It is important to note the date because it marked the high point of NWICO debate in Unesco. At that time the release of the MacBride Report was imminent and the Unesco Belgrade conference promised some important changes in the information order. Western nations seemed about to make concessions to Third World demands for better balance in information flow and faster transfer of technology.

It is unfortunate that the production process of almost four years (the book was published only in 1984) makes much of the material seem outdated in the light of subsequent events: few changes in either world orders of economy or information, the U.S. withdrawal from Unesco, a world recession especially dramatic in the Third World, and a proliferation of technology but without special concessions for the Third World.

The book suffers from a second drawback. It contains 54 chapters in the 485 pages of text, or an average of nine pages per chapter including references. There are few chapters that can afford to give the detail to make sense of the many important and complex issues they tackle. For example, it is dubious that anyone who is not already well versed on the subject can get anything from the six-page chapter in which Agrawal valiently attempts to summarize the vast Indian Satellite Instructional Television (SITE) project. Or what can be gotten from the four-and-one-half pages by Gorove who attempts to summarize the legal and political issues of the 1979 WARC (World Administrative Radio Conference) where NWICO issues were discussed on the technical level? There are many other examples, but these illustrate the basic problem.

There is a positive side to the book. First, the comprehensive nature of the contributions, which are placed in five sections, gives the reader a guide through important NWICO issues of the time. These sections are: 1) Global Perspectives on Information; 2) Transnational Communications: the Flow of News and Images; 3) Telecommunications: Satellites and Computers; 4) Mass Communications: Development within National Contexts; and 5) Intergovernmental Systems: Toward International Policies. The editors make an effort to provide coherent sets of chapters within these sections, but there are a number that seem out of place.

Also, there are obviously weaker chapters that must be put somewhere but their inclusion hurts the overall quality. The editors must be complimented on the technical quality of their editing, the useful appendices (especially the glossary of confusing United Nations acronyms and the esoteric terms of high technology), and the relatively successful effort to make so many chapters fit some reasonable framework without long introductions.

It would be impossible to summarize the vast array of topics, but let me give a list of some chapters that I believe are still useful in this post-information order age. Many of the NWICO debate chapters and those dealing with the MacBride Report are of historical interest, but not as relevant to 1985 as some had hoped five years ago. In section one, the Cruise-O'Brien chapter on information in North-South negotiations is still important even though it has yet to be widely implemented. Also, the Amunugama chapter detailing the cultural issues of the information order debate remains in focus today. The work on news (mostly content analysis) in section two contains some useful empirical data, but it seems repetitious in the light of other studies that have shown the imbalances in news coverage. The proof of imbalance is clear enough by now; what is needed are some policy suggestions as to how best overcome the problem. Unfortunately no chapter in this section really addresses this policy issue. Section three on telecommunications is about technology changes, and the Hamelink, Dordick, Melody, and Rice and Parker chapters all contain useful insight and data very relevant today. Section four on mass communications and national development should be the most relevant to practical communicators in the Third World, but unfortunately it is not. There are a number of reprints in this section (Hornik and Atwood and Mattos come to mind) or simply chapters of marginal quality. The chapters by White and Motta which begin and end the section make the most sense in their theoretical frameworks and the policy implications they draw from them. Finally, section five on intergovernmental systems has much on NWICO and Unesco issues as well as the 1979 WARC, but much of the writing seems now out of focus. However, Pelton's chapter is perceptive about INTELSAT in foreseeing the problems it is now facing with increasing international competition from the private sector, especially in the U.S. Levin's observations about contradictions in U.S. internal and external communications' policies are useful reminders that the International Telecommunications Union (ITU) sessions of WARC are still ongoing and that U.S. policies are still

suffering from these shortcomings. Block's chapter on the International Program for the Development of Communication (IPDC) that was created in Unesco as a more pragmatic way for Western nations to help solve information order problems now seems overly optimistic. IPDC has not received nearly the level of aid promised by beleaguered Western nations when it was created. It suggests that once NWICO pressure was off, things returned to normal.

This book would be a useful library reference and in this sense may be correctly labeled a "handbook." Although there are some useful and even important chapters, the brevity of treatment means that readers who wish to get a deeper knowledge of an issue will have to go elsewhere. ■

Available for \$34.95 from Longman, Inc., 95 Church Street, White Plains, New York, New York, 10601, USA.

Reviewed by Emile G. McAnany, Professor of International Communications at the University of Texas, Austin, Texas. He has written extensively on the effects and uses of communication technologies in developing countries.

2 **Bibliotech: The 1984/1985 Computer Cookbook**, by William Bates. (New York: Quantum Press, 1985).

This book may finally be the pill that cures severe cases of technophobia and technophilia—and that happy balance alone is worth a good bit. But there is more: *Bibliotech* is visually appealing, extraordinarily well written, and "humanizes" the computer revolution by setting computers in a context of getting work done. Unlike the usual perspective that believes history began with the invention of the microchip, Bates does not confuse Silicon Valley with the Garden of Eden. His description of the "invention" of programming is a good story and a good example of the style and tone of the book:

"Ada, the programming language, is named for Augusta Ada, Countess of Lovelace...the assistant of Charles Babbage, inventor of an analog calculating machine that is sometimes considered the first computer. Ada's mother was a nonconformist, and encouraged all of Ada's intellectual interests, including...mechanics and mathematics. In 1834, at 19, Ada married William King, later the First Earl of Lovelace, and eventually bore him three children.

"Ada's work, however, was not hampered excessively by motherhood. Introduced to Babbage, she translated his treat-

tise on the analytical machine into French, adding her own notes that were the first description of what in the 20th century is called computer programming.

"Like many mathematicians, Ada was fascinated by gambling, and carried on a passionate correspondence with Babbage in an effort to work out a foolproof method of betting on horses, evidently without success. In her 30s, Ada gambled heavily, borrowing from her mother to hide her losses from her husband. She died young, at age 36, in 1852, a hundred years before her time."

Ada, the programming language, made its public debut as the darling of the Defense Department in 1980.

This little bit of computerabilia gives credence to the claim that this book is "the classic informal encyclopedia of personal computing." It is organized alphabetically by topics such as "bubble memory," "database managers," "the handicapped," "Japanese computers," "software piracy," "robots," "video disks," and "wordprocessing."

For each of the 100-plus entries, there is a discussion of the role played by the computer, amply illustrated, with appropriate references (including software), and a description of related technology. The six-page section on spreadsheets includes a list of Visi-Calc commands, a glossary of spreadsheet terms, and a description of the Lotus 1-2-3 program that is slowly but surely nudging Visi-Calc (and its relatives) out of first place.

As an "introductory text" to the world of microcomputers, this may be among the finest books I have come across, especially for the person whose background or interests are not highly technical. ■

A French edition will soon be published by Hachette Informatique, 79 Boulevard St. Germain, F75006, Paris, France.

Available in English for US\$14.95 from Quantum Press/Doubleday, 245 Park Avenue, New York, NY 10167, USA.

Reviewed by Patti Lowery who has written and edited in the fields of health care, training, and international development. She was the former editor of *Micros in Management*, a newsletter devoted to microcomputer applications in developing countries.

3 **Communication Strategies: A Guide for Agricultural Change Agents**, by Herbert F. Lionberger and Paul H. Gwin (Danville, IL: The Interstate Printers and Publishers, 1982), 239pp.

Lionberger and Gwin have produced a well-written, clear summary of the U.S. extension model with a perspective adapted to the Third World setting. They provide a good explanation of the extension system from research and development (both pure and applied) through dissemination and integration of innovations.

Their book contains chapters on: 1) Assessing Change Variables in Local Communities; 2) Development and Delivery of Science Based Information the New Way; 3) Applications from Diffusion Research; 4) Problems in the Linking (i.e., the Extension System); 5) Interpersonal Communication; 6) Mass Media Channels as Communication Assists; 7) Planning Communication with Small and Mass Audiences; and 8) Selecting Change Strategies and Going to Work. Each chapter features a summary of recommendations for change agents and a list of references for further reading.

Communication Strategies is well-illustrated with both diagrams and drawings from Third World rural settings. One of its best features is a "Highlights" section at the beginning of the book with summaries of the main points from each chapter. There is also a welcome ten-page Glossary at the end.

The book's stated objectives are "(1) to develop an understanding of change processes and conditions as they apply to agriculture; and (2) to formulate strategies for implementing planned change that will help agricultural advisors with their mission to improve world food production and perhaps most of all help farmers achieve their own objectives." All in all, Lionberger and Gwin have done a good job of making communication, extension, and social change research relevant and accessible to the practitioner.

But it is a particular kind of practitioner. The book is aimed at "agricultural change agents, such as extension agents, farm advisors or county agents, agricultural missionaries, and others who are dedicated to developing world food supplies and helping people in other ways." However, the agricultural change agents the authors seem to have in mind are college educated. Despite the fact that this book is relatively free from social science jargon, it is still for the more sophisticated reader. The typical agricultural extension agent in much of the Third World, with 6 to 12 years of schooling and a limited vocabulary, will likely find this book too demanding. Indeed, a colleague who recently conducted a course on application and diffusion for Third World extension administrators reported that the book was too complex for his trainees and was used as background reading, a role in which it served very well. He also reported that it was useful to the trainers in reviewing theory and practice and in preparing training activities which translated this theory and practice into terms relevant to the Third World trainee.

The authors mention many of the critiques of the U.S. extension model and discuss the necessity of adapting the model to the realities of the Third World setting where infrastructure may be weak, necessary inputs nonexistent, research not relevant to farmer needs, mass media limited, and extension agents poorly trained and supported. However, they do not seem to ask themselves if this model is appropriate under such circumstances. Many authors have argued that utilization of the extension model results in

a knowledge gap. The wealthier, better educated farmers are better able to try and to adopt innovations, the result being that the rich get richer, the powerful more powerful, and the poor and powerless more so. Another argument against the extension model is that its top-down approach reinforces the subservient and dependent role of the subsistence farmer. These results weigh against the utilization of the extension model, critics say, and for the use of communication models more relevant and responsive to the realities of Third World rural development.

Lionberger and Gwin clearly believe that the U.S. extension model is appropriate for developing countries and that it can be adapted to the specific conditions in the Third World. For example, they recommend gearing research toward the development of technologies that benefit the "littles" more than the "bigs," to use their terminology, with appropriate support services like small farmer credit and communication programs aimed specifically at subsistence farmers. They make a point of saying that "change strategies must be selected in the context of what is locally available, possible, and feasible." They discuss, for example, alternative strategies for the selection, training, and coordination of extension agents and for the utilization of media, depending on local conditions. One strategy which Lionberger and Gwin suggest for successfully meeting the needs of farmers is the participation of those farmers in helping determine research and information needs, and in helping the researchers and advisors communicate the new information appropriately. The authors make a concerted and well-reasoned effort to draw lessons from the mistakes of past attempts at too rigid an application of the extension model. The communication specialist who agrees that the extension model is appropriate for, and can be adapted to, Third World agriculture development will find many helpful hints for doing so.

Based on the assumption that the U.S. extension model can be adapted to the developing country setting, *Communication Strategies* offers a clear explanation of how this model works, ideas for adapting it to local conditions, and discussion of problems inherent in the evolving extension programs of Third World countries. This *Guide for Agricultural Change Agents* is a useful reference for technical assistance personnel and Third World professionals attempting to facilitate the growth of extension programs in developing countries. ■

Available from Interstate Printers and Publishers Inc., 1927 N. Jackson St., Danville, IL 61832, USA., for US\$8.95.

Reviewed by Nancy Swing, an independent consultant in development communication and member of the adjunct faculties of the School of International Service and the School of Education at The American University, Washington, D.C.

Low-Cost Telecommunications on the Way

Earlier this year a transmission was relayed that represents a breakthrough in the use of low orbiting satellites for worldwide communications. Using amateur radio frequencies, inexpensive transmitters and receivers, and a personal computer, a team of technical volunteers from the U.S. and Canada sent messages from Hawaii to the University of Surrey in Guildford, England via a tiny satellite orbiting the earth over the poles at an altitude of 429 miles (690 km).

The messages—digitized “packets” of information—were stored in the satellite’s on-board computer. A few hours later, as the satellite passed over Guildford, the letter-perfect messages were downloaded and printed out automatically by the Surrey ground station’s small personal computer.

The system, called PACSAT, will offer telecommunications networking at a fraction of the cost of conventional telexes once it becomes operational. Ground station equipment, costing not more than \$2,000 and capable of operating on batteries or solar power, can be carried in a briefcase. The first full-service PACSAT satellite is scheduled for launch in early 1987.

Volunteers from Volunteers in Technical Assistance (VITA), a private voluntary development agency in Washington, D.C., Radio Amateur Satellite Corp. (AMSAT), an international association of “ham” radio operators, and Interpares, a private Canadian agency engaged in community-based development cooperated in design and launch efforts.

(TV continued from page 7)

Armed with the feedback from the pretesting phase, actual live videotaping with actors began and nine spots were prepared: four on family planning, three on oral rehydration and two on immunization. These are currently being aired nationwide in Peru, on three TV channels, with time paid for by the MOH with A.I.D. funds. Informal evaluation of the spots has shown them to be so successful that funding is being sought to extend the airing of these spots for six months longer than the initial six-month broadcast period. ■

Judy Brace is director of the Clearinghouse on Development Communication, at the Academy for Educational Development. She has written extensively on communication application issues in developing countries.

Reynaldo Pareja is the current Mass Media and Health Practices Project Field Director in Ecuador for the Academy for Educational Development. He has been extensively involved with field applications of public health communications throughout the developing world for the past five years.

(Health continued from page 1)

select DSC materials from the local field office that are most relevant to that issue. A campaign is mounted to inform residents how to best deal with the problem. After their own campaign is over, the committee shares their experience with neighboring villages.

For example, after a DSC-supported campaign helped to reduce the number of water-borne diseases in one village (by installing a filtered water source), members of the development committee from that village visited neighboring villages to discuss their successful campaign, using the same DSC materials they had used in their own village.

DSC resource materials have been developed by organizations such as INADES, a resource center sponsored by the Catholic Church, RA-TELESCO (Zaire’s educational radio and television authority), OXFAM, UNICEF, WHO, and other international organizations. Many of these materials are then adapted to the local culture and distributed to the various field centers. For example, a flip chart on prenatal care developed by a Peace Corps Volunteer for one health center was reproduced and distributed to all 50 rural health-zone field offices. Slide shows, flannel-graphs, and filmstrips are similarly duplicated and distributed.

Special care is taken to ensure that the materials are timely and relevant to the villagers’ needs. Each item is pretested by communication specialists to see how the message is interpreted at the village level. Copies of a poster showing a man holding a baby were widely distributed only after pretesting found that this unconventional image was culturally acceptable, and that it effectively conveyed the desired message that fathers, too, are responsible for monitoring and maintaining their children’s health.

Among the many types of DSC materials used, flipcharts and flash cards have been the most widely distributed. Approximately 60 percent of the village-level nurses use them regularly. Slide shows are frequently used as well. Always popular in the villages, they can be geared to particular village needs, and can be paced to encourage discussion during the slide show.

Traditional forms of communication also have been used to disseminate *Santé pour Tous* messages. For instance, plays, songs, and role-playing have been integrated into health practitioner training programs because trainers know from experience that modern communication devices, although effective, can break down—whereas songs and plays require only human participation to get the message across, and can easily be adapted to particular village needs.

Participants in the *Santé pour Tous* project believe that with continued improvements in the system, their efforts to encourage grass-root participation will outlast existing support structures, because the necessary framework will

have been established at the village level for mobilizing local residents who then go on to share their experiences with others. ■

Iain McLellan is a freelance journalist currently with Radio Canada International and a research fellow with the International Development Research Centre in Canada.

(Ag Com continued from page 2)

Summing Up

A new kind of agricultural communication program is now emerging. It represents a hybrid system which brings together what we have learned about making better media products, with new ways of organizing and integrating media and new approaches to understanding and persuading our audience. Three fields—instructional media, social marketing, and behavioral psychology are contributing to our ability to use communications more effectively in support of agricultural development.

Many of these “new” ideas have been part of excellent programs in the past. They have emerged as the product of common sense and practical experience. But now we have a solid theoretical basis for understanding when they work and how to improve and extend their impact.

The axis of effective agricultural communication is the farmer, his needs, attitudes, perceptions, and behaviors. Our communication strategy must be comprehensive, combining a detailed understanding of our advice, its cost and benefits as perceived by the farmer, how it will be delivered, and what consequences it will produce. The approach must be balanced and complete, not emphasizing one element to the exclusion of another. We need new research techniques which permit us to more easily measure the farmer’s response to communication programs so that mid-course corrections can be made as needed. These techniques must be practical, reliable, affordable, and applicable. The resulting messages must be simple, clear, relevant, and repeated often if they are to be heard, understood, and accepted.

Two decades have gone by since the first large-scale programs of international agricultural communications. Other fields, particularly health and population, have demonstrated that new communication strategies are not only possible, but cost effective. We know now to set more realistic goals and not to expect that communication will solve problems alone. As part of the overall coherent program of agricultural improvement, communication has a role to play, a role at which it is becoming better and better. ■

William A. Smith is a senior vice president of the Academy for Educational Development. **Howard Ray** is Director of Agricultural Sciences and Technology at the Academy for Educational Development.

A New Source of Information on Latin American Education

by Ernesto Schefelbein



The expansion of a cooperative abstracting network now provides greater access to a large number of biographical references on Latin American education for people working to improve that region's educational system. This classification project was undertaken by REDUC (*Red Latinoamericana de Documentación en Educación*), an educational research and development network for Latin America and the Caribbean. It is a private nonprofit system covering 15 countries and 20 associated centers. More than 6,000 reports on educational topics have been abstracted and are now available.

Abstracts are published at each of the national centers for distribution among their national universities and libraries. Participating countries include Argentina, Bolivia, Chile, Costa Rica, the Dominican Republic, Ecuador, Nicaragua, Panama, Paraguay, Peru, and Venezuela. Both the ongoing search for relevant Latin American educational materials, and support for broader use of the centers are encouraged at National Research Meetings (*ENI—Encuentros Nacionales Investigadores*); through preparation and diffusion of relevant state-of-the-art reports; and by supporting specialized networks. Each country has one or more centers that perform these functions in association with REDUC, which are in turn coordinated regionally by CIDE (*Centro de Investigación y Desarrollo de la Educación*) in Santiago, Chile.

As well as being responsible for Chile's center, CIDE's role is also to integrate the entire system; introducing a common index by topics, education levels, and authors, and diffusing this index throughout Latin America. Additionally, CIDE is to act as technical support to the other national centers and to make certain that CIDE norms are maintained in processing and retrieving information.

Among CIDE's key supporters are the United States Agency for International Development (AID) and Canada's International Development Research Center (IDRC). A.I.D. support for the network began in 1981 with a grant to CIDE to assist in establishing six centers. With this support, CIDE also established a central microfiche file/database and carried out a series of regional and subregional meetings. Under a follow-on grant, A.I.D. will support the expansion of the network to four new countries, increase REDUC's database, provide assistance to members' centers in installing microcomputers and in training center personnel to carry out microcomputer searches, and provide assistance in directing educational research information to decision makers.

Network Organization

The purpose of the national centers is to make available locally the findings of educational research in Latin America, and to provide an overview of the educational situation in the region. However, the centers' existence and development alone is not enough to create a network. There must be an active exchange of information among these centers as well.

REDUC has both active and passive centers. Fifteen active centers collect papers and produce abstracts and bibliographies. The five passive centers collect educational materials and send them to CIDE where they are processed and published.

It is expected that national networks, similar to REDUC's regional network, will eventually be created. The experience of Peru could serve as a model. Peru is already operating an internal educational information network with five national centers that are integrated into CIDE, and several other provincial centers that are supported exclusively by internal funds. These national networks will contribute to a system-wide distribution of all REDUC materials.

Each national center has put onto microfiche the available references from national education reports published during the last decade. The bibliographies are indexed by 37 topics as well as by authors and educational levels for ease of retrieval, and to identify where further research in the educational system is needed.

Press clippings represent the main source of information about current educational policies in Latin America, because there are few formal reports available on this issue. Most research centers and libraries have press clipping files but without a topical index, retrieval would be impossible. Seven countries have classified their press clippings using the above-mentioned topical classification system. Over 10,000 press items clipped from 23 newspapers in seven Latin American countries are now accessible through the system.

Analytical Abstracts and Indexes

Each 400-word abstract includes a brief description of the document, the sources used, the method (or contents); and the main conclusions. Sometimes it may be too expensive to keep copies of important documents, so if a copy is not available at the center, the abstract indicates where one can be obtained.

CIDE publishes an annual Latin American Index of all Educational Analytical Abstracts prepared by the network for the entire region. This Index lists each abstract, classified by author and topic, enabling a researcher to identify

suitable materials and to locate abstracted materials by the number and name of the center that produced the abstract.

National Education Research Meetings

With REDUC's assistance, participating countries' Ministries of Education have successfully sponsored nine National Educational Research Meetings between 1980 and 1983. As a result, there is greater visibility of and respect for ongoing educational research in Latin America and the Caribbean. In the future, there will be biannual National Educational Research meetings in participating countries to continue this exchange among the research community. The success of the educational information network depends on the ability of decision makers, documentalists, and researchers to communicate with each other. National meetings play a key role in bringing these groups together.

Papers presented at these meetings are published in their entirety by a few of the national centers, but most centers cannot afford to do this. Instead, they prepare abridged versions of their countries' papers and make these available at a lower cost, encouraging wider dissemination of this information.

REDUC has not only stimulated the diffusion of educational research, it has also stimulated its development. A solid infrastructure for research is now available based on a large body of historical and current materials available to participating countries.

The REDUC project represents better dissemination of important educational information, and contributes to the improvement of educational systems in Latin America. ■

Ernesto Schefelbein is an educational economist who works at the World Bank. He writes on educational planning and finance.

World Congress on Education and Technology

From May 22-25, 1986, the World Congress on Education and Technology will meet in Vancouver, Canada to consider the issues related to technology and our changing world. Participants from around the world will discuss the impact of new technology on education systems, on world cultures, and on global society in general.

As part of the "Innovations and Applications" theme, the Congress will feature an exhibit of high technology equipment and services relating to education and culture from around the world.

Questions concerning this conference can be sent to: Congress Coordinator, British Columbia School Trustees Association, 1155 West 8th Avenue, Vancouver, British Columbia, Canada, V6H.

Briefly Noted

by Judy Brace

Readers will recall previous references to materials produced by the Bangkok office of UNDP. We have received a number of new publications from the Development Training and Communication Planning (DTCP) unit that should prove valuable to many of you. These publications are intended to share the DTCP experiences so as to strengthen national and regional communication and training capabilities for rural development programs.

Guidelines for Planning Extension Programmes sets forth basic principles and planning steps of extension programs in a clear fashion, concentrating on objectives and the process to achieve them whether it is for an agricultural, health, or family planning program.

Making Rural-Based Development Projects More Effective is a brief paper that draws on the research findings of DTCP over the past five years. In answer to the question, "What makes rural development projects succeed or fail?" DTCP's findings are that there must be adequate government or private services at the village level (technology, supplies, information, field-workers, etc.), and there must be participation on the part of villagers in the development effort. Without both of these contributions a project will fail. "More projects fail because of inadequate services . . . at the village level than for any other single reason." This paper does not indicate how to make projects more effective, it simply points the direction to take.

The first in what appears to be a series on *Training for Rural-Based Development Projects* poses a number of questions about training and its effectiveness in development. It calls for a new look at the results of large investments in training and asks if, in fact, these results justify

the expenditures. The paper looks at training as a very expensive form of communication, requiring "physical facilities, teachers, and a great deal of time on the part of both the students and teachers." Perhaps there are other, more efficient alternatives. One is proposed here—a human resources development model—in a simple outline form. Future papers will address individual steps of that model.

A case study documents *The Evolution of the Vietnam Audiovisual Centre* and how it developed from a media production unit for UNFPA in 1981 to a national audiovisual center for the entire country by 1984. The materials produced and the training courses offered are listed.

Those readers who would like a guide to preparing a training workshop will appreciate the report, *Workshop for Subject Matter Specialists to Strengthen Fortnightly Training*, that documents the training of trainers for Nepal's Agricultural Assistants. The trainers were taken through the planning, preparation, and presentation of a two-week training session which they would subsequently conduct. The process was divided into 11 steps which can be followed to design training for any type of content specialist.

In an attempt to clarify the issues inherent in any discussion about microcomputers, DTCP shares its own experience with micros for improving its management capabilities. Their report, *Microcomputer Primer: 1st Edition, a Layman's Guide for Selection and Use of Microcomputers in Developing Countries*, addresses the various uses of micros, the hardware components, kinds of software programs, as well as whether to buy a micro, what to buy, and "getting started." There are a number of reassuring comments and suggestions, and a shared spirit of adventure that should encourage all potential users.

For all of the above publications, and for a copy of their publications list, contact: Publications Editor, UNDP/DTCP, P.O. Box 2-147, Bangkok 10200, Thailand.

For planners and engineers wishing to strengthen the community participation and health education components of their water supply and sanitation programs, WASH (Water and Sanitation for Health Project) and IRC (International Reference Centre) have published a handy *Directory of Organizations Involved in Community Education and Participation in Water Supply and Sanitation*.

The directory contains an overview of 124 organizations in 56 countries as well as 10 international organizations with experience in socio-educational programs and research in water and sanitation. For each organization information is given on address, contact persons, affiliation, working scope and languages, activities, publications, and services.

Apart from being a useful aid to people looking for support to increase community participation in their projects, the directory also aims to stimulate technical cooperation within and between the developing countries.

The price is US\$10.00. Non-commercial organizations and individuals from developing countries can request a complimentary copy. Write to I.R.C., P.O. Box 5500, 2280 HM Rijswijk, The Netherlands. ■

(ERIC continued from page 6)

prevention and meeting emergencies. Six appendices are included: (a) a discussion of how to construct a sample survey for the population; (b) examples of survey questions; (c) examples of several kinds of educational materials and aids; (d) a bibliography of sources of materials and information; (e) a glossary of terms used in the manual; and (f) preliminary guidelines for immunizations and health education. Available from EDRS in microfiche for 97 cents or in paper copy for \$16.15.

• Stambler, Moses. *Health Education for Health Promotion in Less Developed Nations*. 1984. 52pp. (ED 244 879)

Designed for policy makers and health education professionals, this paper presents a rationale and strategies for adapting health education to meet the needs of developing countries. Emphasis is placed on the need for health promotion rather than prescriptive health education. The first of two main sections discusses perceptions of health problems; biomedical components related to health care in less developed countries (demographic factors, malnutrition, unsanitary living conditions, and lack of medical care); weaknesses in USAID and other agency approaches to health education; and historical changes in the training and use of health personnel and resources. Eight health manpower objectives are included. The second section considers changes from health education to health promotion. The role of the Alma Ata Conference (1978) in setting the stage for a participatory approach to health education, the relationship between behavior modification and health promotion, and policy reformulation priorities involved with health promotion are outlined. A chart illustrates differences between health education and health promotion. Also discussed are nonformal and formal school-based health education programs, cognitive bias in traditional school health programs, social variables in health education, the role of teacher training institutes in developing teachers as health agents, and recommendations for curriculum innovation to incorporate the new health promotion approach. The Self Discovery Project developed in Georgia to incorporate the new involvement approach to health promotion is reviewed, as well as similar programs in Tanzania and Brazil. Available from EDRS in microfiche for 97 cents or in paper copy for \$5.65. ■

Reviewed by Barbara B. Minor, Publications Coordinator, ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, New York 13210, U.S.A.

Press Fellowships Available

Applications for the Alfred Friendly Press Fellowship Program are now being taken for 1986 awards. Friendly, a Pulitzer Prize-winning journalist, devoted his life to good writing, honest reporting, and maintaining a free press. This fellowship for practicing journalists, provides a working visit of six months in the U.S. and covers all normal costs including round-trip and U.S. travel, and a monthly stipend. Fellows will work directly with media organizations throughout the U.S. as contributing reporters. Applicants should have six years of reporting experience, and must currently be employed as a print or broadcast journalist in an independent media organization. Journalists from developing countries are encouraged to apply.

For further information and application forms contact: AFPF Program Office, c/o Institute of International Education, 1400 K Street, N.W., Washington, D.C., 20005, U.S.A.

Addressing Health Communication in Africa

Several workshops held in Anglophone and Francophone Africa in recent months exemplified a unique collaboration between the media and health sectors in these two regions. Jointly formulated and executed country-specific plans emerged from these workshops that have been designed to educate and inform the public about family planning as a contribution to good family health.

The workshops were organized as part of the Family Health Broadcast Project of The Johns Hopkins University's Population Communication Services (JHU/PCS), launched in July 1984 with the Union of National Radio and Television Organizations of Africa (URTNA). This project comprises a number of activities designed to increase radio and television coverage of family planning and population issues in Africa including the two workshops mentioned above: a newsletter, *Family Planning Broadcast Bulletins*, containing broadcast-ready information; funds and technical assistance for radio programs; and distribution of innovative radio programs to member countries throughout Africa.

The purpose of the workshops was to acquaint regional broadcasters and family planning experts with the JHU/PCS/URTNA project. Anglophone URTNA members met in Nairobi, Kenya, Nov. 19-23, 1984 and Francophone members met in Dakar, Senegal, Feb. 11-22, 1985. Participants in both workshops included radio and TV producers responsible for health education programs; family health experts in ministries, public health institutions, family planning associations; and special resource persons in the fields of media and family health. Among the organizations contributing either technical or financial assistance were JHU/PCS, The Ford Foundation, the Academy for Educational Development, the Pathfinder Fund, and Family Planning International Assistance. Overall organizational responsibility was assumed by URTNA/Program Exchange Center in Nairobi, and URTNA's main office in Dakar, Senegal.

Objectives

- The objectives of the workshops were to:
- examine the priority family health issues in Africa and the technologies available to deal with them;
 - review previous experience in using radio and TV to educate about health and family planning;
 - discuss the use of radio broadcast bulletins on health;
 - develop preliminary proposals for the use of radio in family health and family planning programs.

For most of the broadcasters, the workshops represented their first exposure to information about the health benefits of family planning. For several of the countries this was the first time that family health experts and radio experts had

worked together. Few of the countries have established working links between the health and information ministries.

The material presented about family planning and radio techniques focused on the particular needs of African countries and was presented primarily by African experts. Many of the participants brought tapes of radio and TV material on family planning to share with other broadcasters and health-sector participants. Significant program production ideas were generated by sharing these productions.

Another important outcome of the workshops was the opportunity it presented for participants to become familiar with the financial and technical assistance available through JHU/PCS, A.I.D., and the other major donors active in the population sector.

Conference Results

Both workshops were highly successful in generating enthusiasm among broadcasters about the possibility of expanding programming on family health. The 13 Anglophone country representatives each developed concrete plans to improve existing or to initiate new programs. As a result, new radio activities are underway in a number of countries including Kenya, where a male-responsibility radio campaign was incorporated into the A.I.D.-funded family planning program; Nigeria where a mini-URTNA workshop is being planned for radio and health experts; and in Liberia where a radio drama series on family planning is being planned. Many of the other proposals presented in Nairobi are being followed up by JHU/PCS and URTNA.

Eleven Francophone countries participated in the Dakar Family Health Broadcast Workshop with equally successful results. The historically conservative position of most Francophone countries regarding family planning and population policies did not prevent them from sending very senior-level officials to represent their broadcast organizations and family health programs.

As was the case in Nairobi, many of the plans that were conceived in Dakar are now being followed up, and official proposals are being prepared in Burkina Faso, Mali, and the Ivory Coast.

There was considerable exchange of information and experience among the countries which proved very beneficial in stimulating lively discussions about family planning policies and programs. Countries that have put family planning information on the air provided orientation to help broadcasters gauge the kinds of radio and educational efforts that might be acceptable in their own countries. Most encouraging was the general climate of opinion in Dakar indicating that the potential for expanding radio/television coverage is far greater than anticipated. Although at the present time nearly all of the

countries give some kind of radio coverage to family planning and sex education topics, this is not yet done on a regular basis in a majority of Francophone countries. The broadcasting of even occasional programs is an indication of major changes in attitudes about the subject.

Future URTNA Family Health Activities

Actions stimulated by the two Family Health Broadcast Workshops range from recognition of the need for regularly produced *Family Health Broadcast Bulletins*, to providing adequate follow up to the many project requests emanating from the workshops. New staff will be taken on by URTNA to initiate and monitor radio initiatives in URTNA-member countries and to provide technical assistance to help improve the quality of family health broadcasts.

For more information about the two workshops contact: Population Communication Services, Population Information Program, The Johns Hopkins University, 624 North Broadway, Baltimore, Maryland 21205 U.S.A. or URTNA, Boite Postal 3237, Dakar, Senegal ■

Microcomputer Update

In our continuing response to your requests for more information about microcomputer applications in developing countries, DCR is passing along information gathered from several sources.

Agriculture

According to *Micros in Management*, the former Microcomputer Clearinghouse newsletter, a highly recommended publication from Michigan State University (MSU) is: "*Microcomputer Statistical Packages for Agricultural Research*," Working Paper #17 by Thomas Stilwell. This 23-page paper is one of many from the MSU series, *International Development Papers*. Nine statistical packages expressly designed for agricultural research are described therein. Single copies are free for AID personnel and Third World requesters, US\$3/copy for others. It can be ordered from: MSU International Development Papers, Dept. of Agriculture Economics, 7 Agriculture Hall, Michigan State University, East Lansing, Michigan, USA, 48824.

A low-cost microcomputer program designed by scientists from MSU and the Agricultural University of Norway, supported by A.I.D.'s Alternative Rural Development Strategies Project, is now helping African scientists to design, manage, and analyze agricultural research experiments. With only brief training, MSTAT can be used by persons with no previous microcomputer experience, and can be run on most microcomputers. Training and software materials are available in English, Spanish, and French. For a brochure on the technical and general features of this program contact: Russell (continued on page 14)

Freed, Institute of International Agriculture, 101 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824. (517/355-0174)

Health

A software package called "Clinical Micro-computer Applications for Developing Countries," has recently come to our attention. The package is written especially for use in areas where medical services are often provided by paramedic personnel, and offers:

- diagnosis and treatment information for prevalent and difficult-to-diagnose diseases;
- family planning, high-risk pregnancy, immunization and nutrition information; incidence and prevalence reports for epidemiological surveillance; recordkeeping of medical and supply inventories for management decision making, for resupplying, and for use monitoring.

The package was developed as a collaborative effort between National Capitol Systems and Medical Logic International, using an interdisciplinary team of physicians, nurses, health systems analysts, and computer programmers. The modules are being translated into Arabic, French, and Spanish.

For further information contact Douglas Mackintosh at (703)671-3360 or write to: National Capitol Systems Inc., 5203 Leesburg Pike, Suite 1601, Falls Church, Virginia, 22041, U.S.A.

Computers Donated

The following article (somewhat longer) appeared in the May 1985 *The Business Edition of Development Forum*, by Robert Lawson.

Under a new agreement between Apple Computers and PACT, the New York-based consortium of development agencies, 150 microcomputers will become available to nonprofit, nongovernmental organizations (NGOs) over the next three years.

While Apple will donate 150 of its popular IIe computers, PACT will administer the project, determine which organizations are eligible to receive the systems, and provide whatever support and training is needed by those selected.

As a condition of eligibility for the computer aid, PACT requires that NGOs, or consortia of NGOs, must have active projects in developing countries. They must be able to demonstrate that they have needs which a personal computer can help fulfill. Even though the [computer] systems are given free of charge, the NGO must also show that it has the resources to operate and maintain an Apple computer. Further, the grants are aimed at development organizations whose activities involve direct grassroots participation by project beneficiaries.

The computer system will include the Apple IIe, two disk drives, monochrome monitor, printer, telephone modem, diskettes, and printer ribbons.

Software accompanying the system will in-

clude: wordprocessing, an electronic spreadsheet for budgeting and planning, database management for the storage and retrieval of information, and communications software for use with the telephone modem.

Application guidelines and additional information may be obtained by writing to: PACT, 777 United Nations Plaza, New York, NY 10017, U.S.A. Telephone (212)697-6222.

Computer News Connections

For our readers interested in keeping up with microcomputer applications in developing countries, the final issue of *Micros in Management* newsletter listed several widely circulated publications to refer to for up-to-date micro information. Among those listed:

Microelectronics Monitor, UN Industrial Development Organization, P.O. Box 300, A-1400, Vienna, Austria.

IBI Newsletter, Intergovernmental Bureau for Informatics, Viale Civiltà del Lavoro 23, 00144 Rome, Italy. ■

(PANA continued from page 16)

Research Findings

Analysis of the data showed that there was a heavy concentration of political news from the national news agencies, international organizations, the NA-Pool and from the PANA headquarters. Considering the number of stories that dealt with visits of heads of state and ministers as well as with meetings and conferences, it appears that a conscious effort is being made to show that there is considerable interaction and cooperation between and among African and other Third World countries.

The NA-Pool contributed the largest percentage of political news with 68.4% of its total coverage. The Pool acted as a link between PANA and other Third World countries with most of its stories datelined outside Africa. It also reported stories of African relations with other Third World countries. Only 42% of Unesco-, FAO-, and ILO-transmitted material was of a political nature; whereas 48.7% of their coverage was economic and 21.4% was social.

Given that one of PANA's objectives is to gear information toward the promotion of development, one would have expected to see a reasonably large proportion of news falling into the economic and social categories. However, PANA contributed only 21.2% in these two categories. If, in terms of promoting African political solidarity PANA does quite well, in terms of social and economic information, it does poorly.

The expectation was that there would be less unfavorable news in PANA copy than, say, AFP (Agence France Presse) or AP (Associated Press) copy. However, neutral stories constituted the bulk of the output of all contributing agencies, ranging from 42.9% to 53.4%.

PANA's Contribution

Because of its regular link with the NA-Pool, PANA is making a modest but significant con-

tribution to the development of Third World or South-South information flow. If, in the past Africans saw each other through the eyes of the transnational news agencies, they now possess an agency that enables them to see each other more directly. This, in itself, is a considerable achievement.

However, the fact that less than a quarter of the members of the Organization for African Unity (OAU) contribute stories to PANA should be a matter of some concern. As PANA itself has pointed out, some countries do not have adequate or appropriate transmission or reception facilities and therefore cannot take full advantage of the services provided by PANA. A much more important factor is that of tariffs. Many news agencies use telex for transmitting and receiving news, and do not enjoy special tariffs from their Posts and Telecommunications departments. However, this issue is being worked on at the present time.

Few stories were datelined Addis Ababa, the headquarters of both the OAU and the UN Economic Commission for Africa (ECA), two very important organs for the political evolution and economic development of Africa. One would have expected the OAU secretariat or information office to have been one of the major contributors to PANA, but this is not the case. This is cause for concern since PANA is a creation of the OAU in the first place.

PANA's Impact

One cannot accurately measure the impact of PANA on its clients after its first year of operation because no such evaluation has been undertaken by PANA or by any other agency. It is recommended that PANA undertake or commission a study to determine what its clients think of PANA's performance. This might provide better insight into the factors that have resulted in disappointing contributions, and help to determine how well PANA is fulfilling the expectations of the publics that it is intended to serve.

As noted, a large percentage of PANA's output was in the political category. Some stories dealt with political issues which were of such local interest that they were not likely to be picked up by other national news agencies to be re-transmitted to their clients. Similarly, most of the stories in the cultural category were about sports contests, which were not likely to be of much interest to users of PANA copy elsewhere. It may be necessary for PANA to establish guidelines for contributing news agencies concerning the type of news that will be of interest to their wider audience.

Currently, PANA transmits in either French or English, but not both. If PANA would transmit all of its copy in both languages, greater use might be made of its wire copy.

Further Research Needs

This study set out to establish a preliminary profile of PANA after one year of operation.

(continued on page 15)

Resources for Infant and Maternal Nutrition



Some helpful tips and information resources on infant and maternal nutrition that may be of interest to our readers in health communications recently appeared in a two-part series "Improving Infant and Maternal Nutrition" by Gayle Gibbons in *Mothers and Children*, a bulletin from the Clearinghouse on Infant Feeding and Maternal Nutrition.

Assessing Information Needs

Identifying some ways to organize and distribute information, the Clearinghouse focused on techniques that have proven effective in disseminating messages at the local, regional, and national levels. The following suggestions will help you assess your information needs and plan your nutrition communication strategy:

- identify your target audience;
- determine what kinds of information the target audience need;
- examine sources of information currently available to the target audience;
- look at different options for reaching your target audience;
- use other information activities/channels to expand your audience;
- begin your information activities on a small scale;
- scale your activities to the staff and available budget;
- identify information activities of other organizations and government ministries to use in planning your own activities.

Information From the Field

According to *Mothers and Children*,

"A vast amount of information exists on infant and maternal nutrition that people in the field need but do not have access to. . . . [Outlets] for previously unpublished information should be identified . . . to help nutrition workers monitor new research and to profit from the experiences of related projects."

The list that follows contains a wide variety of information sources, including newsletters, that can serve as useful models for those undertaking health and nutrition information activities.

- **Appropriate Health Resources & Technologies Action Group (AHRTAG), 85 Marylebone High Street, London W1M 3DE, United Kingdom**
AHRTAG publishes a quarterly newsletter, *Dialogue on Diarrhea*, in English, French, and Arabic. Free to Third World subscribers. The newsletter focuses on issues of diarrheal disease control.
- **The Breastfeeding Information Group, P.O. Box 59436, Nairobi, Kenya**
This breastfeeding support group publishes a bimonthly newsletter in English. (No price given) They also have published materials on how to start a breastfeeding support group.

- **Caribbean Food and Nutrition Institute (CFNI), P.O. Box 140, Mona, Kingston 7, Jamaica**
CFNI publishes *Cajanus*, an English quarterly, free to developing countries, others US\$12/year. They have a library and produce and distribute materials on infant feeding to the 17 Caribbean member-countries. A catalog of their materials is available.
- **Clearinghouse on Infant Feeding and Maternal Nutrition, American Public Health Association (APHA), 1015 15th Street, N.W., Washington, D.C. 20005, U.S.A.**
APHA publishes *Mothers and Children* 3 times yearly, in English, French, and Spanish. It is free to developing countries, others US\$5.00/year. The Clearinghouse is an international center for information and materials on all aspects of infant feeding and maternal nutrition. It provides bibliographies, documents, and referrals.
- **The Foundation for the Peoples of the South Pacific (FFPSP) P.O. Box 1493, Suva, Fiji**
FFPSP publishes an English quarterly, *Su-PaMINN*. (No price given) It covers regional maternal and infant nutrition activities, information sources, training activities, and new publications aimed at health professionals and women's groups.
- **International Children's Center, Chateau de Longchamp, Bois de Boulogne, F75016 Paris, France**
The ICC publishes *Children in the Tropics*, a bi-monthly English, French, and Spanish newsletter. A yearly subscription is US\$17.00. The Center encourages the study of all problems concerning childhood and the training and education of persons involved in work with children, emphasizing developing countries. They maintain a library and provide information.
- **International Centre for Diarrhoeal Disease Research (ICDDR) G.P.O. Box 128, Dhaka 2, Bangladesh**
ICDDR publishes a bimonthly English-language newsletter, *Glimpse*, which features articles on new research and program activities on diarrheal disease primarily in Bangladesh and Asia. (No price given) Issues contain abstracts of recent journal articles, summaries of ongoing research projects and conferences, and descriptions of programs.
- **The Institute of Nutrition of Central America and Panama (INCAP), Apartado Postal 1188, Guatemala City, Guatemala**
Suplemento Sobre Nutrición Materno-Infantil, Lactancia y Destete is INCAP's thrice yearly newsletter, published in Spanish only. (No price given) It covers Central American regional breastfeeding and maternal nutrition activities and issues. The newsletter is part of a larger information project run by INCAP. Information requests accepted.

- **Teaching Aids at Low Cost (TALC), Institute of Child Health, 30 Guildford St., London WC1N 1EH, United Kingdom**
TALC is an important source of books, slide sets, and flannelgraphs on nutrition and child health. The materials are designed for use in developing countries and are available at cost. They also publish an occasional newsletter that reviews other materials aimed at field practitioners. A catalog of TALC materials is available.

- **Voluntary Health Association of India, C-14, Community Center, Safdarjung Development Area, New Delhi, 110 016, India**

VHAI publishes a bimonthly English-language newsletter, *Health for the Millions*. (No price given) This is a broad primary health care publication, intended for rural health and development practitioners. Issues are thematic, but also contain information about program activities in the regions of India. VHAI is a large publisher of educational materials on many primary health care subjects. A catalog of print and audiovisual materials is available.

- **World Neighbors, 5115 North Portland Ave., Oklahoma City, Oklahoma 73112, U.S.A.**

World Neighbors has prepared a number of overseas development materials including filmstrips, flipcharts, and booklets.

Many of the filmstrips have been adapted for different regions of the world and are available in other languages. A catalog of print and film materials is available.

The Clearinghouse on Infant Feeding and Maternal Nutrition would like to hear more about other newsletters and information activities. Readers are encouraged to send samples of their newsletter or other materials to:

The Clearinghouse, c/o APHA, 1015 15th Street, Washington, D.C. 20005, U.S.A. ■

(PANA continued from page 14)

Given this specific objective, the scope was rather limited. Further studies might include:

- studying populations covered by PANA to determine if focus is balanced between the social elite and other population groups;
- comparing capital city/urban coverage with numbers and types of rural stories carried;
- measuring the amount of space PANA wire copy gives to continuing crises and to other "negative" news, with the space allocated by transnational news agencies to the same crises;
- comparing PANA's output for designated periods with a Western transnational news agencies (AP or AFP) to determine if the two follow fundamentally different philosophies, ideologies, or value systems. ■

Paul A.V. Ansah is director of the School of Journalism and Communications, University of Ghana. He recently worked on a research project on communication policies in Africa.

The Pan-African News Agency: A Preliminary Assessment

by Paul Ansah

This article examines the performance of the Pan-African News Agency (PANA) in the context of the role it intends to play towards establishing a more authentic voice for Africa, in accord with the values of the New World Information and Communication Order (NWICO). This article (somewhat longer) originally appeared in Media Development, 4/1984.



The major objective of PANA is "to promote an effective exchange of political, economic, social, and cultural information among member states and to resolutely gear it towards the promotion of development." (From the Preamble of the PANA Convention.)

The Pan-African News Agency was established in May 1983 to voice African interests and aspirations, and correct the "distorted image" of Africa, its countries and peoples, resulting from partial and negative information published by foreign news agencies.

It was also felt that the flow of news that went in a north-south direction compelled the developing countries of the South to see each other through the perspectives of the powerful transnational news agencies whose interests and value systems did not coincide with those of the people in the Third World.

The purpose of our study was to establish a profile of PANA one year after it began operation. This should help to determine what PANA has done to provide the type of information that will balance the "partial and negative" image of Africa that the transnational news agencies are accused of depicting and to determine how well PANA is fulfilling the goals it set out to achieve.

PANA's Self Assessment

On the occasion of its first anniversary, PANA released a publication which was a bal-

ance sheet of its operations during the first year. This publication sums up the position of PANA thus: "In the past, news coverage of Africa has tended to concentrate very heavily on the sensational—disasters, wars, assassinations. Seen through this prism, Africa appears a threatening and irrational place. PANA can help straighten this distorted image by providing detailed and continuous coverage of all aspects of life on the continent. Only this type of coverage can begin to make sense of Africa."

According to this feature PANA had grown from its maiden transmission of 25 stories totaling 5,460 words from five national news agencies, to over 20,000 words a day from 15 national news agencies who transmit a total of 80 stories daily. Stories are also received from about 40 other countries on an irregular basis.

Not only does PANA receive and transmit stories from national news agencies, it also transmits news from the information departments of the SWAPO and the ANC liberation movements as well as from international organizations such as Unesco, FAO, ILO, and the European Economic Community (EEC). In addition, it transmits about 1,500 words a day from the Non-Aligned News Agencies Pool (NA-Pool). PANA could increase the volume of its daily transmissions, but it can transmit for only eight hours a day.

PANA depends on journalists seconded to its headquarters from about ten national news agencies. These journalists produce features and provide special coverage of major political, economic, and cultural events. Currently PANA transmits only in the languages in which stories are originally sent to it—either French or English, although many of PANA's own features and some international agency contributions are transmitted in both languages. Because most national news agencies do not have translation facilities of their own, they can only use copy

that comes to them in a locally understood language. This may be one of the reasons there has been limited use of PANA copy.

PANA itself is unable to assess how much of its material gets into the African mass media, because many African publications and radio stations do not cite their sources. PANA plans to add a photo service and to establish a data bank. It also plans to add Arabic as a transmitting language, and to increase its daily output to 30,000 words.

Methodology of the Study

PANA wire copy from April, May, and June 1984 were selected for this study. The Ghana News Agency made wire copy available to us that was received from PANA, namely the news releases for 64 out of the 91 days during that three-month period.

The material was then coded in terms of source, length, content, language, category, direction, and frequency. The two transmission languages were coded to find out in which language a greater volume of material was transmitted. The material was classified into four broad categories based on those used by PANA in its self assessment: political, economic, social, and cultural.

The material was also coded in terms of direction: favorable, unfavorable, and neutral. Favorable stories reflected harmony within and between nations—cooperation, development, economic growth, easing of tension. Within the unfavorable category were included all stories which depicted or suggested conflict, misunderstanding, crises, border disputes, human or natural disasters, poverty, and disease. What did not fall into either of these categories was classified as neutral.

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Development Communication Report

Clearinghouse on Development Communication

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ISBN 0192-1312



Academy for Educational Development

Agencies: Community Health Campaign Radio in Africa; Cinema and Sound Messages; TV Health Spots; Educational Research Network; Health Communication Workshops; Nutrition Resources; PANA Assessment

Development Communication Report

In this issue we return to an earlier DCR tradition. We are focusing on a single development sector—health. In an upcoming edition we will look specifically at communication in agriculture. In both these sectors exciting new development approaches are underway: approaches which we feel are both worthy of special attention and applicable to other development sectors as well.

A shift in donor agencies (AID, WHO, UNICEF) toward child survival through programs for oral rehydration, immunization, breastfeeding, and infant nutrition has caused health professionals to look for new ways of reaching mothers. Social marketing, behavioral studies, village health practices, and ethnographic research are being combined to introduce complex new child care behavior. Already several of these new programs have had dramatic results. In Egypt, Honduras, Colombia, and Indonesia, among other countries, health and communication professionals in both the public and private sectors have forged a new alliance—one that we feel can broaden and strengthen our audience's ability as communicators to make a positive contribution to development.

Communication for Improved Health Services

by Dr. Robert E. Black

In recent years, primary health care programs in developing countries have emphasized the utilization of simple techniques to assure child survival. These techniques include immunizations against important pediatric infectious diseases, oral rehydration therapy (ORT) for diarrhea, and breastfeeding and growth monitoring to prevent malnutrition. Each of these techniques is known to be efficacious, with benefits demonstrated by clinical trials and pilot studies. However, the effectiveness of these techniques in routine national programs depends not only on having efficacious interventions, but also on achieving optimal use by the target group.

System Constraints

Large investments directed at increasing the availability of these techniques through primary health care have often failed to accomplish the coverage necessary to have a substantial impact on child survival or nutritional

status in the population. Services may be used inappropriately, infrequently, or not at all by the intended target groups. Many factors affect the use of services, including perceptions about illnesses, attitudes concerning the appropriate sources of care, availability of "alternative" therapies, perceived quality of services available, distance and cost of services, as well as underlying factors like income, education, social status, and religion. Although these factors affect the use of all health services—traditional and modern, they present special problems in regard to the simple interventions of primary health care, since these are largely preventive, not curative, services. Immunizations prevent later serious infections like measles, oral rehydration therapy prevents dehydration, but does not stop diarrhea, breastfeeding and weight monitoring prevent malnutrition. It must be recognized that preventive services or actions are, in most societies, less readily accepted than therapeutic services. It is an

unfortunate observation that most developing country populations are still reluctant to immunize their children against serious future disease, but adopted, almost as soon as they were available, the use of antibiotics and other medications for common self-limited illnesses.

Immunizations have been used in health programs for many years, yet it is estimated that less than 20 percent of the target age group in developing countries is currently being fully immunized with the six recommended vaccines. This is, in part, due to poor acceptability of the vaccines. A measure of this is that even in areas where vaccines are available, the dropout rates after the first of the required three doses of DTP vaccines are as high as 50 percent. Resistance to immunization comes from a limited understanding of specific infectious diseases and of the protective effect of vaccines.

(continued on page 2)

I am pleased that this issue of *Development Communication Report* is dedicated to Health Communications. Today there are so many new health technologies that can save the lives of millions of small children—oral rehydration therapy, immunization, improved infant feeding, and related child survival practices. More research needs to be done, but clearly the technologies we now have need to be rapidly adopted by health systems throughout the world. Communication is a fundamental part of this technology transfer.

Experiences from Honduras, The Gambia, Egypt, Bangladesh, Colombia, Indonesia, and Swaziland demonstrate that mass media, social marketing, and strategies for behavioral change work when well integrated into health delivery systems. This issue, timed to coincide with the second International Conference on Oral Rehydration Therapy, ICORT II, presents promising new findings in this field.

I hope that readers will be encouraged to apply some of the successes outlined here in their own programs.



M. Peter McPherson, Administrator
Agency for International Development



Development Communication Report

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Development Communication Report, published quarterly by the Clearinghouse on Development Communication, has a circulation of over 6,000. The newsletter is available free of charge to readers in the developing world, and at a charge of US \$10.00 per year to readers in the industrialized countries.

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Academy for Educational Development, a nonprofit planning organization, and supported by the Bureau for Science and Technology of the U.S. Agency for International Development as part of its program in educational technology and development communication.

The views expressed in *Development Communication Report* are those of the authors and not necessarily those of its sponsors. Original material in the *Report* may be reproduced without prior permission provided that full credit is given and that two copies of the reprint are sent to the Editor.

Readers are invited to submit typed manuscripts of no more than 1000 words, and to send in photographs.

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AED

International Division

Academy for Educational Development

Communicating for Acceptance

Health education and communication efforts are critical elements in improving individual acceptance of vaccines and of community participation in immunization programs. In particular, communication efforts are needed to involve informal groups, especially women's groups, schoolteachers, and community leaders in promoting preventive health initiatives. (See *Colombian Crusade* in this issue.)

Oral rehydration therapy has a demonstrated efficacy in correcting dehydration and is felt to be an important household intervention to prevent dehydration, malnutrition and death. Recognition of the usefulness of this simple, inexpensive technology has led to its incorporation into national health care programs in most developing countries of the world. In spite of this recognized importance for the last decade, ORT was estimated by the World Health Organization to be appropriately used for only a percent of diarrheal episodes in children of developing countries in 1983. It is obvious, from evaluations of some ORT programs, that information on proper treatment of diarrhea is not being conveyed adequately to the public. Furthermore, this lack of knowledge is often abetted by the ignorance of the health workers, who are often themselves not treating diarrhea correctly.

The communication of the ORT message to the public and to health workers at all levels is of increasing importance. The ORT message offers even greater challenges than the immunization message (primarily motivation to accept vaccination.) The ORT message must not only motivate individuals to use the "new" treatment but also must teach them how to use it. The message must be reinforced by health workers and community leaders, who must themselves be educated in the indications for and use of ORT. Furthermore, ORT must be used for every diarrheal episode, as many as eight per year in developing country children, not only on a few occasions as with immunizations. It is necessary that the new behavior become routine to the user, further accentuating the need for continuous communication of a consistent message and reinforcement of appropriate behavior.

Communicating Education

Some health programs can be cited for their successful use of communications techniques to achieve greater use of ORT. The Oral Therapy Extension Program of the Bangladesh Rural Advancement Committee was initiated five years ago. This program is built around oral rehydration workers who receive training in a five-day course, three days in class and two in the field, and further training in teaching methods and communication skills to enable them to effectively deliver their ORT messages. These workers visit each household within their area and incorporate selected important points about ORT into their conversations with community residents. As they explain how to prepare the oral rehydration mixture, they actually prepare it in the home and then supervise the mothers in its preparation. The project's built-in evaluation system

has demonstrated that 98 percent of households were able to make a safe, effective oral rehydration solution and that mothers remembered the key ORT messages as well after six months as after one month.

Effective Mass Communication Strategies

Mass communication has also been used successfully in ORT programs. The Honduras Mass Media and Health Practices Project, implemented by the Academy for Educational Development, used a combination of radio, printed material, and interpersonal communication through health workers to popularize use of a new ORS product, *Litrosol*. In an Egyptian project, developed jointly by the government and the John Snow Health Group, ORT use rose dramatically as a result of sophisticated communication techniques.

Conclusion

These interventions illustrate several important steps in communication of health messages, namely: 1) analysis of the local vocabulary and beliefs, in the initial stages, to enable optimal message design and implementation; 2) pretesting as many messages, materials, and methods as possible; 3) focusing on carefully selected sets of objectives and behaviors; and 4) monitoring and improving the campaign while it is in progress.

Experience has shown that an understanding of cultural values and inclusion of health education and communications is essential to the delivery of basic health services. A WHO Expert Committee in 1983 concluded that "health, science, and technology can make a real impact only if the people themselves become full partners in health protection and promotion," and that health education must be integrated into health programs at all stages.

Dr. Black is Professor and Chairman, Department of International Health, The Johns Hopkins University School of Hygiene and Public Health. His work and research focuses on vaccine development, diarrheal disease control, epidemiology, and infectious diseases.

Vaccine Development Agreement

In September 1985, AID signed an agreement with the U.S. Public Health Service to develop new and improved vaccines for preventable diseases that plague developing countries. The first two vaccines to be tested under this program are an aerosolized measles vaccine, developed by Dr. Albert Sabin, which is expected to protect children as young as six months, and a vaccine against rotavirus diarrhea, the single most common cause of serious diarrhea in infants in most parts of the world.

Communication Works Across Cultures: Hard Data on ORT

by Anthony Meyer, Dennis Foote, and William Smith*

The Gambia and Honduras are extremely different countries. Yet from 1980 through 1984 the same communication and social marketing strategy was applied to teaching oral rehydration therapy (ORT) and related child survival practices in both countries. Within that strategy, each country developed campaigns that had their own character, peculiarities, and challenges. Nevertheless, data bridging three years and the two cultures show almost identical results, including sustained adoption of ORT and significant improvement in nutritional practices. This article will report on the most interesting similarities, differences, and data from the two countries, based on recently published longitudinal studies conducted by Stanford University and Applied Communication Technology.

The Setting

West Africa and Central America have a tremendous common problem: infant mortality. In both Honduras and The Gambia, diarrheal dehydration is the leading cause of death. Yet teaching about ORT to prevent dehydration due to diarrhea has major local constraints. There is a 3 percent female literacy rate in The Gambia, along with severe difficulty among 48 percent of females in interpreting two-dimensional pictures or drawings without assistance, a difficulty sometimes called "pictorial

*The opinions expressed here are the authors' and are not represented as the opinions or policies of AID.

illiteracy." In both countries, the practice of purging and withholding food during diarrhea was common. In almost everything else relevant to an educational campaign, the countries were different. Spanish language and culture contrasted with The Gambian Wolof and Mandinga languages and tribal customs. Nuclear family dwellings of six to ten members in Honduras contrasted with extended family compounds of up to 100 members, including multiple wives, in The Gambia. Numerous private radio stations and publications in Honduras contrasted with one national station and relatively few print materials in The Gambia. In Honduras, locally packaged oral rehydration salts (ORS) were promoted under the product name of *Litrosol*. In The Gambia, a water-sugar-salt (WSS) home-mix solution was promoted, while World Health Organization ORS packets were reserved for clinic use.

The Campaigns

The educational interventions in Honduras and The Gambia to teach ORT and related practices can be characterized as "campaigns" in the sense that highly specific objectives were pursued and multiple channels—radio, print materials, direct contact—were coordinated to support these objectives. Yet the interventions in Honduras and The Gambia parted with usual campaign practices because of their extended vision. Although emphasis shifted among topics for limited periods of time during the interventions, the key communication methods and procedures for con-

ducting the interventions would not end abruptly but become an ongoing part of the public health education process and the health care delivery system.

What methods and procedures were applied? The interventions in Honduras and The Gambia adapted lessons learned from past experiences, drawing on the disciplines of social marketing, development communications, anthropology, and behavioral analysis in addition to the history of clinical experiences related to each objective. The methodological sequence was as follows:

- Village-level investigations were conducted to understand the local behavior, concepts, and vocabulary related to campaign objectives and to develop an audience profile. Focus groups, direct observations of practices in households, and in-depth interviews of local health personnel were used.
- Educational objectives were ranked in terms of what the audience needed to know and do; how feasible and costly the recommended practices were; how the recommended practices related to already prevalent practices; and what would reinforce trial and adoption of the recommended practices.
- Messages were developed and prototype materials were pretested on the basis of audience and product analyses.
- Multiple channels—media, print, face-to-face—were coordinated to carry simple, noncontradictory messages that relied on the functional strengths of each channel.
- Extensive monitoring of all systems permitted adaptation over time.

The Evaluation

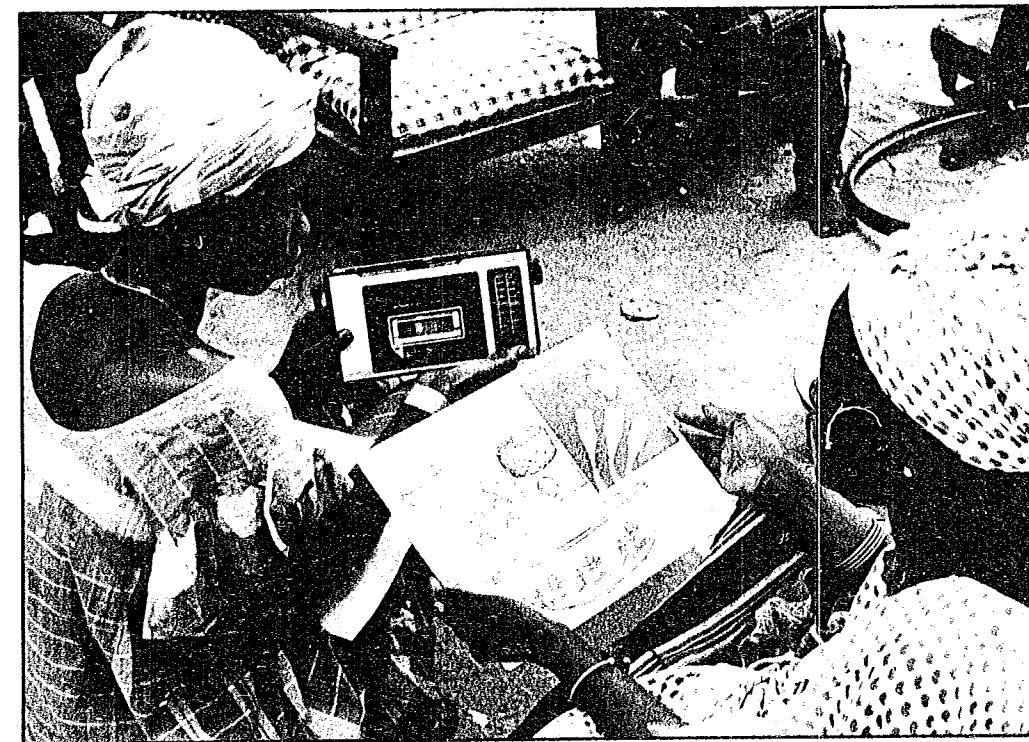
Stratified, random panels of approximately 750 to 1,000 households with posttest controls, were surveyed in each country—nationwide in The Gambia (600,000 population) and in Health Region I of Honduras (400,000 population)—in repeated waves over a three-year period. In Honduras, a mortality study in Health Region I and additional surveys to assess campaigns to support other health intervention activities were also conducted.

The overall evaluation plan examined a sequential model of changes, recognizing that changes in any individual does not necessarily follow the same pattern:

- Exposure—Was the audience involved in the campaign and how?
- Knowledge—Did the audience learn the campaign information from its exposure?
- Behavior—What did the audience do differently subsequent to their exposure?
- Health Status—What were the health outcomes?

The strength of an evaluation of this nature and the attributed impact of an intervention does not rest on one indicator alone, such as increased learning about ORT. Rather the power of such an evaluation is in the conver-

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Women in The Gambia learn the correct ORS recipe using a color-coded flyer and listening to broadcasts of how to interpret it.

gence of indicators across the "causal chain" and in the timing of changes of the sample population with specific intervention messages. The key objectives were evaluated in terms of the above profile of significant, sustained change in both countries. The magnitude of observed change substantially exceeded that which is commonly expected from commercial advertising or public education campaigns. In this respect the power of the intervention methodology is confirmed. Highlights of the evaluation will be reported here. Full reports and project descriptions are available as noted below.

The Gambia

Pictorial Illiteracy. One technique used with strong impact in The Gambia was the "Happy Baby Lottery." This was a contest of skill rather than chance and proved successful in overcoming the difficulty many Gambian women experience in interpreting two-dimensional graphics. Flyers with color-coded pictographic instructions for mixing the WSS solution were distributed nationally as "lottery" tickets. The radio served as the first line of interpretation. Mothers were instructed how to mix the WSS by being verbally led from the sugar section of the flyer, coded blue, through the salt section in yellow, to the water section in pink. Soda bottle caps with sugar and salt, and soda bottles of water were used to illustrate the recipe. Radio also directed mothers to second- and third-line sources of instructions. Selected village women who had been trained by health workers in how to instruct mothers in the mixing of the solution, were identified by red "happy baby" flags over their homes. For treatment of severe cases of diarrhea, the radio directed mothers to the health workers. Mothers were invited to attend one of 72 mixing contests being held around the country over a five-week period. Correct mixing of the WSS solution during the contest earned a plastic container, correct answers to questions about the administration of the solution earned a bar of soap. These winners were then eligible for a grand finale drawing of 15 who received radios as prizes.

Gambian Learning and Behavior Changes. The "Lottery" in The Gambia marked the beginning of a two-year effort to teach WSS and related diarrheal control and infant feeding practices. The evaluation shows that the mothers learned about ORT and changed their behavior accordingly. An overview of the two-year data set indicates sustained adoption of WSS solution to treat diarrhea.

Gambian mothers first had to learn of the existence of a water-sugar-salt mixture for home treatment. Awareness reached a high of 90 percent of mothers by the end of the campaign. They then had to learn a formula for mixing the solution at home. The formula required that they know the three ingredients and the correct amounts of each. Questions about these were combined into an index, by the end of the campaign, 70 percent of mothers and all health workers achieved a perfect score of this mixing index.

These gains in knowledge were translated into changes in behavior. One result of having

was that more cases were treated at home; the percent of cases treated at home was 17 percent at the start, but averaged more than 50 percent for the entire second year.

WSS displaces virtually all other home treatment: an average of over 90 percent of cases in the entire second year were given WSS if they were treated at home. Coverage of all cases with WSS treatment rose quickly and stayed high during the second year. At the beginning of the campaign only 4 percent of all diarrhea cases were treated with WSS, but during the second year an average of over 50 percent were treated with this solution.

Other changes also resulted from campaign messages. The inappropriate practice of withholding foods other than breast milk during diarrhea fell to a tenth of its initial level (dropping from 32 percent to 3 percent). The feeding of solid foods during diarrheal episodes rose from 14 percent at the beginning of the campaign to 45 percent.

Honduras

The campaign in Health Region I of Honduras emphasizing ORT and related diarrheal control and infant feeding practices lasted two

"The magnitude of observed change substantially exceeded that which is commonly expected from commercial advertising or public education campaigns."

years, then expanded to the national level and to other topics during the third year—immunizations, malaria control, and compliance with tuberculosis treatment. The same method of village investigation, behavioral analysis, pretesting, integrated use of multiple channels, and monitoring were applied in developing and implementing a sustained, phased, public health communications intervention.

Honduran mothers also learned and changed their practices significantly—and fewer of their children died of dehydration due to diarrhea.

ORS Usage. *Litrosol* was a newly introduced product, so there was no awareness of it before the campaign. Within six months of starting the campaign, however, half the mothers could recall the product name. The percent of mothers who could recall the name *Litrosol* leveled off at about three-quarters of all women during the campaign's second year.

At the beginning of the campaign none of the Health Region I mothers had used *Litrosol*, but within six months more than one third (37 percent) of all surveyed mothers had tried it. By the end of the campaign over 60 percent of mothers had used *Litrosol*. Notably, not only had most mothers tried it, but the case treat-

ment of all cases within two years. Data from evaluation of follow-up efforts after the initial campaign indicate that at the end of three years, use rates were still at an impressive 30 percent of all cases.

Mortality Drops. Tracing changes in mortality in developing-country settings with limited resources was the greatest challenge to evaluation. Although tracing mortality could not be done adequately in The Gambia, in Honduras there were regional mortality statistics of sufficient reliability, covering an adequate time period, whereby a significant impact on mortality could be documented. Widespread use of *Litrosol* appears to have reduced diarrhea-related mortality by a substantial amount. The proportion of deaths involving diarrhea among children younger than five fell from 40 percent in the two years prior to the campaign to 24 percent two years later. Total mortality also dropped by a slightly smaller amount.

The campaign methodology has subsequently been applied to tuberculosis, malaria, and immunizations as well as diarrhea. These campaigns also achieved high levels of exposure and knowledge change. For example, in the malaria campaign, knowledge that the reason for having one's house sprayed was to kill mosquitos nearly doubled, from 49 percent before the campaign to 94 percent afterwards.

Program Expansion

The project has been expanded into the new AID initiative, HEALTHCOM, which will use experience gained here and work in up to ten new countries, broadening the focus on ORT to include immunization, infant nutrition, breastfeeding, vector control, and other child survival technologies.

Reports on the Mass Media and Health Practices Project intervention and evaluation are available by writing to HEALTHCOM, c/o DCR.

Dr. Meyer, a development communication specialist, is HEALTHCOM Project Manager in AID's Office of Education. Dr. Foote is President of Applied Communication Technology, and Dr. Smith is Senior Technical Director of the HEALTHCOM Project and Senior Vice President at the Academy for Educational Development.

PTC'86 Forum

The Eighth Annual Forum of the Pacific Telecommunications Council will be held January 12-15, 1986 in Honolulu, Hawaii. PTC'86 will focus on "Evolution of the Digital Pacific." English, Japanese, and Spanish simultaneous interpretation will be provided at plenary sessions. For information contact: Pacific Telecommunications Council, 1110 University Avenue, Suite #308, Honolulu, Hawaii 96826, Telephone (808) 941-3789, Telex 7430550PTC.

Two-Way Radio for Rural Health Care Delivery

by Michelle Fryer, Stanley Burns, and Heather Hudson

Over the past six years, the MEDEX* two-way radio network has emerged as the most effective and reliable system of its kind in Guyana. Originally designed to ease the communication difficulties of medical personnel in the field, this two-way radio system is now fully incorporated into the administration of primary health care.

Background

Rural health care delivery poses formidable problems in developing countries. Not only are there shortages of physicians and facilities, but lack of adequate transportation and communications hinders the efforts of health care providers in the field. Faced with vast rural and remote areas without medical services and an acute national shortage of physicians, the Guyana Ministry of Health embarked upon a program in 1976, designed to train paraprofessional health workers, "medex," to serve these isolated areas. (Medex is the abbreviated form of "extension of physician" in French.) Initial funding for the project came from the Canadian International Development Research Centre (IDRC) and the U.S. Agency for International Development (AID), with training assistance from the University of Hawaii.

After their training in the capital city of Georgetown, medex were posted throughout the country to become the "front line" of the health care delivery system. However, once in the field, the medex were effectively isolated from their supervisors, their sources of drugs and supplies, and from each other.

The only developed transportation systems in Guyana are along the coast. Inland is the *riverain* region where transportation is primarily by boat. Farther inland is the hinterland, where jungle gives way to savannah, and where four-wheel drive vehicles and motorcycles can be used only in the dry season. In the rainy season, medex may be cut off from the people they serve for weeks. Infrequent air service links Georgetown with the larger interior towns.

Like the transportation system, the national telecommunications system is developed only along the coast. Communication by letter to the interior could take weeks or months. In an emergency, medex would try to send a message through one of the private radio systems, which were often inaccessible and unreliable. As a result of the limited transportation services and lack of communications, medex were unable to summon assistance in emergencies, to follow up on patients who had been sent to a hospital for treatment, or to order urgently needed drugs and supplies. Medex administrators and trainers were also concerned about the lack of contact with medex in the field who could not be supervised and could not take time away from their posts for continuing education.

To address these needs, AID funded a pilot project from 1979 to 1985 which established a

dedicated two-way radio system for the MEDEX program. The initial network of ten sites has now been extended to twenty-eight sites, with plans for at least ten more.

System Design

Site-to-site and site-to-headquarters distances range from 48 km to in excess of 400 km. Topographical constraints and extremes of distances coupled with acceptable reliability requirements, dictated the choice of a high-frequency, single-sideband two-way radio system.

The system design, chosen in consultation with the Guyana Telecommunications Corporation (GTC) which operates the national telephone network, is a low-powered system operating on three frequencies with sound quality similar to that of a taxi radio.

During the first phase of the project, portable generators were used at some sites and solar panels at others to provide the system's power. After a year it was found that fuel for the generators was expensive and difficult to

obtain, and that some generators had broken down. No problems were encountered with the solar panels, so generator-run units were replaced with the more efficient solar installations.

Each site is equipped with a fully transistorized 25-watt Stoner SSB-40A transceiver, a three-element dipole antenna, a 12-volt automotive battery, a five-watt solar panel for trickle-charging the battery, and a set of hand tools.

Operation and Maintenance

The approach taken to operation and maintenance of the system is as important as a sound technical design. To ensure that Guyanese personnel would be able to take full responsibility for the system, the project provided: adequate training; local installation and maintenance; effective program management;

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**For the purpose of this article, medex refers to the paraprofessional health worker and MEDEX to the program.*

A Communication Strategy to Improve Nutrition in Indonesia

by Marcia Griffiths and Elizabeth Nobbe

The ability to meet the health needs and provide the essential health services to a community is both a promise and an expectation of a primary health care (PHC) project. Another important goal, establishing community-supported health care services, does not necessarily result in measurable or easily documented benefits that national governments may demand before assisting a local health service. Social marketing offers a way out of this dilemma. It helps to develop programs based on the needs and resources of the families that health programs serve, and at the same time it identifies types of behavior change that can be documented.

As an experimental project, the Nutrition Communication and Behavior Change Component (NCBC) of the Indonesian Nutrition Development Program (UPGK) showed how social marketing could further the national program's goal of significantly improving the nutrition of Indonesia's young children and pregnant and nursing women. The social marketing approach successfully developed nutrition communication materials that were responsive to the needs, desires, and resources of the communities, particularly of the mothers and volunteer nutrition workers.

The UPGK, begun in 1974, popularized community nutrition. Its clear, easily communicated and measured goal—the monthly increase in weight by each child under five—is

promoted by a trained corps of volunteer nutrition workers, *kaders*, through a monthly weighing program.

NCBC Project Development

Between 1977 and 1979 Dr. IB. Mantra, NCBC Director, established administrative and community infrastructures modeled after UPGK in five culturally diverse areas in Indonesia.

In mid-1979, with technical assistance from Manoff International, the project departed from the approach of the national plan and embarked upon an unprecedented course with the formative evaluation of educational messages and a communication strategy. The success of the NCBC Component was to be judged by whether education—as the sole intervention—could produce significant improvements in the nutritional status of children and the improved nutrient intake of pregnant and lactating women in project communities.

The first step was to identify and execute qualitative research on the child and nutritional problem. This was done for three and pregnant and nursing women, consisting of in-depth household interviews, concept testing with mothers, and a focus group interviews with *kaders* and community opinion leaders.

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A Focus on the Consumer: Social Marketing for Change

by L. Edward Lucaire

Social marketing (SM) is neither magical nor mystical. It is merely the application of commercial marketing principles to advance a social cause, issue, behavior, product, or service. SM has added a framework to social efforts that heretofore lacked organization, and has inspired projects that otherwise might never have been undertaken.

In the United States, SM techniques have been particularly successful in the health field. The National Cancer Institute used marketing techniques to change the behaviors of U.S. women and health professionals regarding breast cancer detection. The National High Blood Pressure Education Program, using these same marketing techniques, has increased patient compliance with antihypertensive regimens. Likewise, the American Cancer Society developed a sound marketing program to convey the benefits of giving up smoking, especially for teenage girls.

Although advertising and other communications are central to social marketing, the discipline also depends upon other elements of what is called the marketing mix: product, price, place, and promotion. Social marketing is a cyclical process involving six steps: analysis, planning, development, testing, and refining elements of the plan; implementation; assessment of in-market effectiveness; and feedback.

Developing Country Applications

In developing countries, health has similarly been the greatest beneficiary to date of applied social marketing techniques. Family planning programs and oral rehydration therapy (ORT) projects have used SM techniques effectively in numerous Third World countries. For instance, in Honduras oral rehydration salts (ORS) were first marketed in 1980 under the brand name of *Litrosol*. *Litrosol* was heavily advertised on television and radio, and widely distributed through the existing health care system and by local village volunteers. By the end of the first year of the ORT campaign, 49 percent of the mothers had actually used *Litrosol* and 71 percent could recite the radio jingle composed for this campaign. More importantly, during the two-year campaign period, diarrhea-related mortality in children under the age of five dropped from 48 percent to 25 percent. Similar ORS marketing results have been achieved in Egypt and The Gambia. About 50 percent of Egyptian mothers had used ORT after one year of the program and over 50 percent of cases for the second year of the campaign in The Gambia used ORT.

These successful ORT efforts have attracted the interest of other international organizations involved in child survival, and social marketing is being integrated into their overall strategy. Last year UNICEF and the CRS

Company, Ltd. in Nepal signed a contract to market their own oral rehydration salts under the brand name *Jeeran Jal*.

Social Marketing for Contraception

Social marketing has been even more widely applied in the sale of contraceptives in developing countries. Contraceptive social marketing (CSM) programs are well-established in Bangladesh, Sri Lanka, India, Thailand, Nepal, Colombia, El Salvador, Jamaica, Mexico, and Egypt. More recently, programs have been established in Honduras, Guatemala, Barbados, St. Vincent, and St. Lucia. SOMARC (Social Marketing for Change) is a project funded by the U.S. Agency for International Development (AID). It is working with existing CSM programs and also helping to launch new CSM programs in The Dominican Republic, Ghana, Indonesia, Kenya, Tunisia, Costa Rica, and other countries. Other health topics such as immunization, breastfeeding programs, and disease prevention efforts may also benefit from a marketing perspective.

Market research is an essential aspect of the marketing process. Research may be conducted to help make marketing decisions on brand names, pricing, target audience, product preferences, awareness attitudes, etc. For the most part, local private-sector market research firms are hired to conduct contraceptive social marketing research.

Contraceptive products are often distributed through AID, although they also are available through other sources such as the International Planned Parenthood Federation or directly from manufacturers.

Local distributors and wholesalers are often used to channel products to hospitals, clinics, and retail outlets. Some programs like Egypt's Family of the Future (FOF) developed its own distribution system and a staff of medical representatives to administer the program. Contraceptive social marketing programs in Nepal and Bangladesh have their own sales forces as well as local advertising agencies who promote, publicize, and advertise contraceptive products. Thus, CSM programs are successfully functioning as legitimate marketing organizations in developing countries, and are using local private sector resources in the process.

The results of these programs are encouraging. In Egypt, 31.2 percent of contraceptive-age women and men use Family of the Future products. More importantly, FOF's aggressive promotion of its products has expanded the public's consciousness about family planning. This promotion, almost certainly, has greatly contributed to the increased use of all contraceptives in Egypt. The National Family Planning Board in Jamaica, which produces *Partner* condoms and *Perle* oral contraceptives,

has about 80 percent and 30 percent of their respective contraceptive markets. Profamilia, the contraceptive social marketing program in Colombia, has a 31-percent share of that contraceptive market. In all these countries, birth rates are declining.

Conclusion

Social marketing has proven successful despite significant obstacles like cultural and religious resistance, lack of knowledge about the topic, illiteracy, and pricing constraints. But SM is no shortcut for success; it requires both experience and sensitivity to local conditions. Fortunately, many developing countries now have their own marketing resources. Local private-sector advertising and marketing agencies are helping public and private sector programs. In countries where local resources are scarce, AID has created several programs to provide technical assistance in social marketing. These include SOMARC, PRITECH, and HEALTHCOM. Contact the Clearinghouse on Development Communication, or your local USAID Mission for further information on any of these assistance programs. ■

Edward Lucaire is a Senior Associate with Needham Porter Novelli, a U.S. marketing communications firm that provides assistance and technical advice to developing countries in sectors such as health and family planning.

Child Survival Management Course

A six-week child survival management course, including a two-week field practicum in Haiti is being offered by Boston University School of Medicine and School of Public Health from March 1 - April 15, 1986. This is an integrated course with enrollment limited to 25, intended for participants from countries with limited resources. It provides training in: essentials of child survival; introduction to health economics; management methods for health services; microcomputer applications; integrating health facility and program design; community participation; and field study techniques.

Applicants should have completed the equivalent of a bachelor's degree or other comparable technical or professional training after high school. Applications must be received by January 15, 1986. For application information write to: Management for Child Survival Course, Office of Special Projects, Room A-310, Boston University School of Public Health, 80 East Concord Street, Boston, Massachusetts 02118, USA. Telephone (617) 247-6018. Telex: 200191BUTUPI

A Focus on Behavior: The Role of Health Practices Studies

by Paul Touchette

Most health education programs use knowledge and attitude change as the primary measure of success, but knowledge is often a poor predictor of either use or proper use. Ninety percent of women in the Bangladesh Rural Advancement Committee (BRAC) rehydration therapy program learned the *Seven Points to Remember* about oral rehydration salts (ORS), but only eight percent of women in some locations of the program area actually used ORS to treat diarrhea. These results are common among development programs—it is often easier to teach facts, even change attitudes or beliefs than to alter behavior. This realization has led planners to focus on the specifics of a particular behavior, trying to assess not only what a mother must learn to improve her family's health, but how she already behaves and why she might not want to change.

Within the context of child survival, the mother is faced with numerous decisions such as:

- Why should I give up an old remedy for a new medicine?
- Why should I take a healthy child to a clinic to be stuck with a needle and then be fretful all night?
- How do I remember the correct ingredients in a home-mixed ORS solution?
- How do I determine whether my child is malnourished or just small?
- When do I introduce weaning foods and how do I determine which ones are best?
- How do I discuss having fewer children with my husband when he wants to have another male child?

Each question suggests a complex set of behavioral responses. New health practices require new responses, many of which are not well understood, believed in, or practiced. The role of behavioral analysis within this context is to probe the reason why a given practice continues, how a new health practice might be best introduced, and how such a practice can be designed, presented, and used

Why Behavior Does Not Change

The experimental analysis of behavior suggests six circumstances that may contribute to the absence of desirable behavior, either singly or in combination: 1) Necessary skills or knowledge may be absent. For example, rural mothers often know that it is good to boil water, but they do not understand that boiling the water actually kills the parasites they fear. 2) The ability to identify when to alter the behavior may be undeveloped. Mothers know that some foods make their children ill, but do not know that the longer the food sits after preparation the more likely it is to cause illness when fed to their children. 3) Necessary materials or implements may be unavailable. ORS packets, for example, are often out of stock. 4) There may be no positive consequences for engaging in the behavior. Most preventive behavior, for example, produces no immediate results, but is beneficial in the long run. 5) There may be positive consequences for engaging in incompatible behavior, such as fasting during diarrhea. Fasting does cause the child's stool volume to decrease—a goal mothers want to achieve. 6) There may be punishing consequences which discourage the desired behavior pattern. During rehydration, for example, a child may vomit, or the diarrhea may appear to increase.

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Reaching Mothers in Swaziland: Preliminary Findings of a Child Survival Program

by Robert Hornik and Pamela Sankar

[This is a brief summary of the results from a still ongoing evaluation of the Swaziland Communication for Child Survival Project (HEALTHCOM). A final report will be published shortly with details that could not be incorporated into this version. It will be available from the authors.]

The Swaziland Diarrheal Disease Control campaign was a collaboration of the Ministry of Health of Swaziland, The Combatting Childhood Communicable Diseases project, and the AID Communication for Child Survival (HEALTHCOM) Project. It was based on earlier work in Swaziland as well as the previous Health Communications programs in Honduras and, in particular, in The Gambia. As in the other programs, it relied on a combination of mass media and face-to-face channels in an attempt to change practices related to the treatment of diarrheal disease.

Campaign Preparation

The preparatory phase of the campaign began in April 1984, with the formal campaign running from September 1984 through March

1985. The coordinator of diarrheal disease control activities, Gladys Matsebula, two health educators from the Public Health Unit of the Ministry of Health, Alfred Mndzebele and Bongani Magongo, and a technical advisor from the Academy for Educational Development, Dale Huntington, planned a three-pronged campaign: 1) radio programs to be developed in an intensive radio workshop and broadcast on current development programs carried on the national radio system; 2) printed materials including a flyer with mixing instructions and posters for display at health clinics and elsewhere, and 3) workshops to train the health staff, other extension personnel, and local volunteers in treatment of diarrheal diseases including use of oral rehydration therapy (ORT) for dehydration. Local volunteers and others involved in information dissemination were given yellow flags to display outside their homes to indicate they knew how to administer ORT. Eighteen staff training workshops covering about one third of the country were held during the first months of the campaign; 88 radio programs and spot announcements were produced; and 260,000

mixing flyers and 7,500 posters were printed and distributed.

The campaign focused on a few objectives, specifically 1) acceptance of a home-mixed, water/sugar/salt (WSS) solution as a treatment for diarrheal dehydration; 2) continued feeding during episodes of diarrhea, and 3) feeding with special foods after diarrheal episodes. The campaign particularly emphasized the introduction of a new formula for mixing the solution—one liter of water, eight soda bottle capfuls of sugar, and 1/2 capful of salt. This new formula replaced a previous one that contained one capful of salt which project medical advisors believed risked toxicity.

Campaign Evaluation

The evaluation, conducted by the Annenberg School of Communications at the University of Pennsylvania, reveals preliminary results suggesting that the campaign achieved noteworthy success, particularly in rates of adoption of recommended practices. Data sources included before- and after-campaign

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What the Behaviorist Does

Behavioral analysis is designed to identify the relevance of each of the above six categories within the context of a specific culture, behavior, and/or individual. The behaviorist observes, questions, and tests behaviors, looking for the:

- cost to the individual of engaging in new practices,
- compatibility of new practices with existing patterns of behavior and cultural expectations,
- complexity of new practices,
- perceived and actual antecedents of a given practice,
- perceived and actual consequences of the practice, and
- observability of the target practice or its direct by-product.

How Behavioral Analysis Helps

During an immunization program in Honduras, behavioral observation and in-depth interviews in rural clinics revealed that many mothers were bringing in children who had already completed their vaccination series. Mothers could not read the complicated vaccination card; they did not know the number of doses needed to complete each series, so did not know when their child had finished the vaccination series. Mothers did, however, recognize the type of vaccination when it was applied because they observed where it was being applied on the child's body: polio—orally, measles—deeply in the arm, tuberculosis—more superficially in the arm, and DPT—in the hip. Nurses were chastising mothers, who frequently had walked miles to the clinic, because they had brought in a child who had already been immunized. Consequently, these mothers often advised neighbors not to go for needed vaccinations in the series.

Analysis of this behavior led to the development of a strategy that focused on designing an immunization card that mothers could understand, and that also served as positive reinforcement for completing the immunization series. The card graphically depicts each immunization and the number of shots needed to complete the series. The card functions as an educational tool for the health worker, a reminder for the mothers, and a reward device health workers use to praise mothers.

Another example comes from The Gambia, where the original design of a national "Happy Baby Lottery" was to be a standard promotional gimmick—the contest was to be announced on radio; numbered tickets with pictures of ORS mixing instructions were to be distributed; and a random drawing of lottery numbers would select the winners. Instead, an imaginative, behaviorally-inspired twist was added and successfully executed. Gambian women had to correctly mix an ORS solution in public. They learned to mix the solution through special radio broadcasts that explained the mixing pictures on a flyer that was distributed throughout the country. Actual mixing contests were then held in villages throughout the country. Local women demonstrated their ORS mixing proficiency before a

drawing. The "Happy Baby Lottery" moved beyond a simple promotional activity to being an exciting and effective vehicle for helping mothers to actually practice the new behavior on a massive scale.

Some Useful Principles

These two examples help demonstrate how behavioral approaches such as careful observation and informal incentives can be applied to field programs. Some of the most salient principles emerging from recent behavioral studies include:

- Observation of behavior within the broad context of the culture in which it is found.
- Skillful arrangement of events so that reinforcement follows the desired behavior. Behaviorists argue that individuals can do a great deal to reinforce their own behavior.
- Individual recordkeeping or monitoring of behavior, for example, is of extreme importance. Graphs, visuals, and other concrete representations of progress can be important reminders and reinforcers for individuals adopting difficult new behaviors.
- Decisions of when and how to end a behavior change program should be systematic to ensure continued maintenance of the new practice. Fading of reinforcement, the gradual withdrawal of accompanying behaviors, the search for opportunities to practice new behaviors in the general environment, and the use of intermittent reinforcement should all be considered.

The practice of behavioral analysis does not substitute for the insights or methodologies of other disciplines; many different fields contribute to our understanding of human behavior. Communications, sociology, anthropology, and economics provide important points of view. In fact, behavioral analysis can help to enhance the contributions of other disciplines and sources of information by highlighting the contributions they have to offer.

Behavioral analysis is not covert manipulation. It is, instead, a powerful way to keep our focus on the primary goal—widespread *adoption*s of critical new child survival *practices*. ■

Dr. Touchette is Principal Psychologist and Associate Professor of Pediatrics at the University of California, Irvine where his research focuses on normal and abnormal attention patterns as they influence learning.



Swaziland continued from page 7)

surveys, each with 450 rural mothers chosen through national random sampling procedures, and a diarrheal disease registry kept by 20 clinics which listed more than 10,000 children during the course of the campaign.

Exposure. *Nine of every ten mothers reported having had contact with at least one of the selected campaign channels. Three out of*

radios, and of those more than 80 percent reported having listened to the programs that carried the messages. The flyers, the only widely distributed printed materials, were recognized by three out of five mothers and were owned by one in five mothers. As many as one-half of the mothers in areas where workshop training had taken place, reported some recent interaction with either clinic staff or local 'yellow flag' volunteers about oral rehydration therapy. About one-fourth of the mothers in other areas reported having had recent contact.

Knowledge. *After the first six months of the campaign, more than one in five rural women had learned and could repeat the correct formula—a substantial accomplishment considering that a previous formula, already known by some women, was being replaced with a new one. It appears, in fact, that some sources must still have been diffusing the old formula. When knowledge of either the old or the new formula was counted as correct, the proportion knowing all three ingredients of the formula went from 20 percent before to 50 percent after the campaign.*

Other campaign messages encouraged feeding during diarrheal episodes, and advocated special feeding afterwards. Although acceptance of feeding during diarrhea was little affected by the campaign (42 percent before and 53 percent afterwards), the perceived need for after-diarrhea feeding was substantially affected by the campaign (16 percent before versus 44 percent afterward). It has been suggested that there might have been conflicting messages from different sources about feeding during diarrhea—such as clinic staff and common-sense rejection of the notion that a child with diarrhea would be able to eat.

Practice. *By the third month of the campaign, 60 percent of the children had been treated with WSS or ORS—a level sustained over the remainder of the campaign. The effects of the campaign on actual practice were evaluated by examining two subsamples of women: 1) those who reported they currently or within the past month had a child sick with diarrhea, and 2) those mothers who had brought their children into clinics for diarrheal treatment. Among the first group, 45 percent of the women said they had treated their child at home with WSS before the campaign; after the campaign 57 percent reported they had done so. This gain is more striking if one combines this report of use with the report of measured knowledge of the correct formula for mixing WSS. Counting either the old or new formula as correct, only 16 percent used WSS and knew the correct formula before the campaign; whereas 32 percent used WSS and knew the correct formula after the campaign. A second indicator, fundamentally consistent, gives a more optimistic picture: of the children coming to clinics at the start of the campaign, about 43 percent had been treated with oral rehydration therapy before coming to the clinic according to those bringing in children.*

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The consistency of these two indicators of current practice, although based on self-reports, suggests that change is occurring and that it is closely associated with campaign activities. The magnitude of the change, particularly if the clinic registry data is accepted, is consistent with a solid success for the campaign where substantial prior diffusion limited the possibility of large changes in practice.

Future Questions

These are the preliminary evaluation results. Analysis will continue for some months with subsequent reports on data from a study of the validity of self-report data; analyses of effects of exposure to campaign channels on individuals' learning and practice; and peoples' susceptibility to campaign messages. The final report will also discuss the extent of institutionalization of the HEALTHCOM methodology within the Swaziland Ministry of Health. ■

Robert Hornik is Associate Professor at the Annenberg School of Communications, University of Pennsylvania. He was principal investigator for the evaluation of health communication projects in Peru and elsewhere under the AID-sponsored Mass Media and Health Practices Project. Pamela Sankar is a Ph.D. candidate at the Annenberg School of Communications, University of Pennsylvania.

Formative Research: Pretesting, Revising, and More Pretesting

by Margot Zimmerman and Lena Steckel

Formative research is defined as evaluation activities that occur during a project to determine if the objectives are being met and, if not, to modify the project's direction to ensure that they are. Thorough and extensive pretesting is the formative research technique that the Program for the Introduction and Adaptation of Contraceptive Technology (PIACT) and its sister organization, the Program for Appropriate Technology in Health (PATH), rely on to develop well-understood and culturally appropriate print materials.

Before materials are finalized or printed, an interviewer should pretest them with representatives of the target population to determine if the intended message is being conveyed and if it is clear and acceptable to them. Pretesting should be done while the materials are still in an unfinished state so audience-generated alterations can easily be made. Revised materials should likewise be tested until they communicate the information as intended.

Since PIACT-PATH work with countries where large percentages of the population are nonliterate, its motivational and instructional materials rely on pictures (drawings, photographs, or a combination) to convey the message. Often, pictures are augmented by a line or two of simple text in the local language. This text also requires careful pretesting, for vocabulary selected by health workers or program managers may be too sophisticated for their clients.

The following examples from the field demonstrate the importance of pretesting to assure that print materials are appropriate to the group for whom they are being developed. Details that may at first appear unimportant can render a material useless and even offensive to the target audience.

Symbols. While designing illustrations for the message "During pregnancy, take only medicine prescribed by a doctor," researchers pretested a photograph from existing material that showed several medicine bottles with a red "X" superimposed over them. Pretesting results indicated that the illustrations did not convey the message that patients should use only medications prescribed by a doctor. Many respondents did not even see the "X." Others did not know it symbolized "don't," "no," or "danger," and, in fact felt that the message encouraged the use of medications.

Positive messages. The audience's negative reaction to the photograph described above prompted project staff to test two alternative pictures. The first photograph showed a doctor gesturing to a woman and telling her in simple words not to take a pill that had not been prescribed to her; the second photograph (see illustration adapted from the pho-

tograph) showed a doctor giving a pregnant woman some pills. Results of pretests showed that comprehension was higher with both of these photographs which were accompanied by simple texts, but a majority of women preferred the second photograph because it represented a positive message.

Use of common objects. Project staff in Pakistan, producing materials on prenatal care for rural women, thought a drawing of a health worker using a pointer to indicate proper foods on a wall chart would be interpreted as a message explaining the importance of a healthy diet during pregnancy. When the drawing was pretested, it was misinterpreted as a health worker shooting a gun. Obviously, these women had never seen anyone using a pointer while giving a demonstration! The illustration they chose depicts the food groups above the head of the health worker (see illustration).

A Health Audio/Video Series

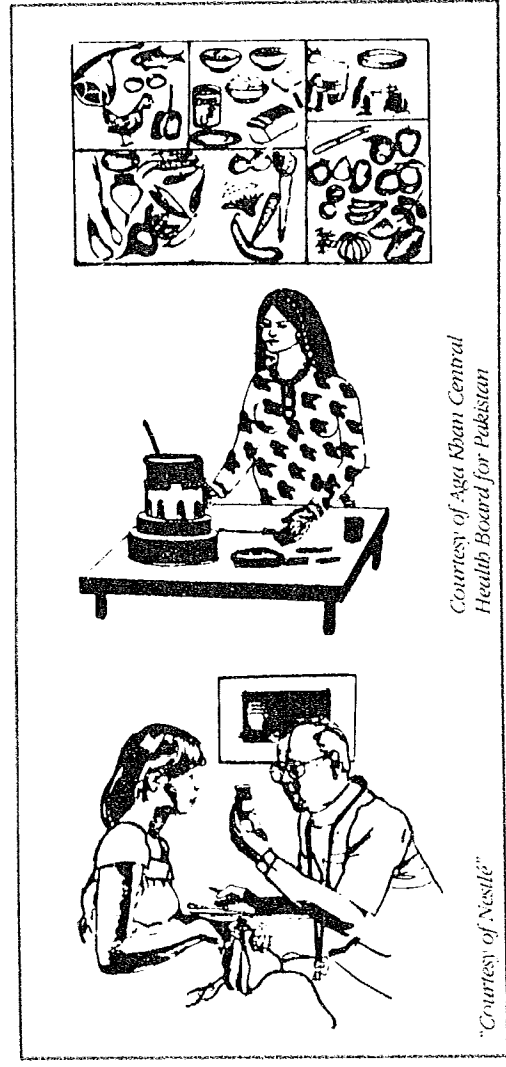
The Food and Nutrition Program of the Faculty of Interdisciplinary Studies of the Pontificia Universidad Javeriana in Bogotá, Colombia, under the auspices of the United Nations University, has recently produced an audio and video series, "The Road to Health." The development of these programs included research and evaluation steps with the target audience, the results of which gave the necessary guidelines for health education needs, and appropriate communication channels.

The object of these programs is to educate low-income mothers about actions they can take to help the health and nutrition of children under five years of age.

The educational series, in Spanish, consists of 12 programs on (betamax) videotape of approximately 15 minutes each, and 17 programs on audiotape of approximately 10 minutes each.

The series is designed for use in educational discussions with groups of mothers, couples, or families, and to train extension workers in issues of health and nutrition.

For information on how to obtain this series contact: Patricia Avila de Hails, Facultad de Estudios Interdisciplinarios, Pontificia Universidad Javeriana, Carrera 10, No.65-48, Bogotá, Colombia.



Courtesy of Aga Khan Central Health Board for Pakistan

Courtesy of Nestlé

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The Fireworks Syndrome: WHO

by Jack Ling, Director
Division of Public Information
and Education for Health

[The following piece has been adapted from a speech presented at the first ICORT Conference held in Washington, D.C., June 1983. We would like to thank Jack Ling for permitting us to reprint a portion of it in the DCR.]

There is traditionally a world of difference between information and education. The task of the former has consisted of collecting information and presenting it in an interesting way, often through the media, to different audiences. The information officer's responsibility is traditionally perceived to end there. Education, on the other hand, to be successful requires an act of participation on the part of the learner and an all-important dialogue between the educator and the learner. But in a broader sense, and certainly in recent years, the two have converged.

Two WHO meetings, "New Approaches in Health Education for Primary Health Care," and "New Policies in Primary Health Care," strongly endorsed an integrated strategy using both interpersonal and mediated communication in the planning and delivery of primary health care. To use media without links to the existing health care services and face-to-face contact would create what might be called a "fireworks syndrome," by analogy with a display of attractive fireworks which fizzle out after a few seconds in a darkened sky. On the other hand, person-to-person work, while recognized as the most effective method of teaching, will benefit greatly from close partnership with the media which can stimulate and help to sustain interest in health problems on the part of individuals, families, and communities.

The role of the media in the education of the public, as seen by WHO, can be summarized as follows:

- to help strengthen political will by appealing to policymakers;
- to raise general health consciousness and clarify options concerning actions that have a strong bearing on health;
- to inform decision-makers and the public about the latest developments in health sciences and publicize relevant experiences;
- to help deliver technical messages;
- to encourage dialogue and facilitate feedback from communities.

The two WHO meetings urged that health education workers should be learner-facilitators as well as teachers and participants who

The World Bank Addresses Health

by Margaret Valdivia, Project Officer
Population, Health, and Nutrition

The World Bank began allocating and distributing funds directly for health-related projects in 1980. Promotion of appropriate health behaviors is now a component of most population, health, and nutrition projects financed partly by the Bank.

Development Support Communication activities supported by the Population, Health, and Nutrition Department encompass public education, personal counselling, patient education and the promotion of behavioral, consumer, and attitudinal change in specific target groups, as well as traditional health education and community mobilization. The criteria used for selecting the approach and methodology to be applied in a particular program are technical feasibility, cost effectiveness, and appropriateness to the context of the program. The scope of a project can be national, local, or highly specific.

Among the activities the World Bank has supported are: making films for sensitization and training of health personnel; making film and TV documentaries and documentary dramas for young audiences on teenage pregnancy issues; marketing one or two highly specific nutrition interventions nationally and in defined geographic areas; communicating by radio with volunteer workers; preparing teaching and learning materials for use by community leaders; mounting large-scale multimedia national campaigns maintained over long periods, and producing print materials for non-literates for mass distribution. ■

must work to stimulate community involvement. Health education is seen as the means to encourage and enable communities to identify their health problems and translate them into simple and realistic goals that they can monitor themselves.

It is important for us to learn from past experiences: the painful lessons of the 1950s and 1960s showed us that apparently successful technical programs were no more than "fireworks" in a dark sky. Only if attention were paid to building up the health system infrastructure so that the gain made by the specific program could be sustained, consolidated, and enlarged was there a chance of turning the fireworks into a permanent light. ■

UNICEF: The Potential of Social Marketing

by James Grant, Executive Director

[The following is taken from UNICEF's The State of the World's Children 1985.]

Today, the resources of the mass media—and the techniques of social marketing—are beginning to be used to put the techniques of a child survival revolution at the disposal of millions of parents. In Brazil, the equivalent of US\$1 million a year in radio and television advertising time has been put behind a nationwide campaign to promote breastfeeding. In India, child survival messages are being proclaimed by advertisements on buses and billboards.

The potential of social marketing is just beginning to be explored. But already, there is a body of experience available to guide future efforts. First, it is clear that people's lives and behavior cannot be transformed simply by waving the magic wand of social marketing. Mass media messages about the need to boil water or to breastfeed or to feed a child more frequently cannot solve the problems of firewood shortage or maternity leave or give a mother more hours in the day.

Secondly, it has proved important to recognize the differences as well as the similarities between commercial and social marketing. Because social marketing campaigns usually seek a more important change in behavior and attitudes than a change in loyalties to a particular brand name, mass media messages in themselves are usually not enough. In the promotion of a more complex process such as oral rehydration therapy for example, mass media campaigns can be an important complement to but not an adequate substitute for practical face-to-face demonstrations by health workers or trained volunteers.

So far, the most common mistake of social marketing campaigns seems to be a concentration on the superficial aspects of commercial marketing techniques at the expense of its deeper disciplines. Research into how a target audience perceives its own problems and needs, into what sources of information have credibility, into what kinds of presentation are acceptable and what kinds of information are practicable, are all essential to campaigns which seek to bring about complex changes in human behavior. In developing such campaigns, considerable resources of time, money, and creativity need to be invested in message selection, media planning, analysis of message resistance, and monitoring of message response. A lack of professionalism in any one of these disciplines can easily diminish the effectiveness of a social marketing campaign. ■

A Communicator's Checklist

USAID: Reaching Out for Health

by Dr. Kenneth Bart
Agency Director for Health

Outreach with effective health technologies—this may be the most significant challenge facing the international health community today. We *know* how to reduce infant mortality. We must now deliver on this promise. Public health education and communication are central elements in this process and the Agency for International Development (AID) strongly supports them.

Over the last decade, AID has invested significantly in research and development to find ways for communication to better strengthen proven health care delivery. Along with WHO and UNICEF, AID has supported state-of-the-art applications of social marketing methods for child survival. These efforts are beginning to show results. Several of these high impact AID-, WHO-, and UNICEF-sponsored programs are reported in this issue of *Development Communication Report*. These show the value of careful village-level research and the effectiveness of an integrated program utilizing multiple communication channels. They also provide a base of experience and ongoing institutional learning for continued work in this area.

I sincerely hope that the lessons from these programs will contribute to the achievement of the ambitious goals for child survival programs that we have set for the rest of this century. ■

Child Survival
ACTION PROGRAM
AGENCY FOR INTERNATIONAL DEVELOPMENT

Social Marketing: New Imperative for Public Health

by Richard K. Manoff (New York: Praeger Publishers, 1985) 279 pp.

The literature on social marketing has received an important addition with *Social Marketing: New Imperative for Public Health* by Richard Manoff. For the book not only provides time-tested, experience-based lessons on the fundamentals of designing and implementing a social marketing program; it also shares with the reader many valuable insights which, in total, create a treatise on the subject. Not without a moral foundation, Manoff's book convincingly lays out a caring, compelling appeal to treat social marketing as a true imperative to public health advancement.

Manoff's writings expose the reader not only to the "how" of social marketing but also to the "why." Lending further importance to the message, we develop a sense of what the prospects for future health care will be if we don't take full advantage of the potential of social marketing.

A well-crafted social marketing message designed for the mass media, this book reflects all the important steps required for penetrating, effective communication. It has a keen awareness of the target audience (in this case health promoters and communication planners worldwide): the problems requiring resolution are well defined; opposing viewpoints are recognized and addressed; benefits of following the suggested course of action are crystal clear; the viewpoint is made more convincing through examples; and the ever-important "call to action" is in sharp focus throughout the communication.

A major theme in Manoff's book deals with the enormous opportunity to help right some of today's health care imbalances, especially those that befall the poor. While the gap can be closed by better health service delivery, so too, he argues, can it be shortened by smartly applying traditional marketing techniques to social development issues.

Seeking to increase support for social marketing, Manoff directly, yet sensitively, confronts the questioning of mass media's role in social development. Rightly so, he challenges the thinking that failure to find conclusive, positive results in many social marketing programs calls into question the effectiveness of mass media for social causes. "How about the content of the messages in these 'failed' programs?" he asks. "Have we looked carefully at media delivery?" "Are we being truly persuasive in our appeals?" The role of mass media in influencing attitudes and decisions is undeniable. At its most basic level, there is no

reason to think that *well-conceived* social development messages delivered via radio or TV should, in most cases, be without strong influence. Manoff states "it is specious to argue that health and nutrition objectives are far more complex to achieve (than those of commercial products). . . . certainly in nutrition we are dealing with the promotion of foods that are no more complicated than those in the commercial world. . . ."

A second Manoff theme ringing true is his call for a greater level of skill and aggressiveness in social marketing campaigns. He points out that "though marketing has demonstrated its usefulness for social goals, it is rarely carried out with the skill and thoroughness characteristic of the commercial world." He challenges the practitioners of social marketing to advance their level of expertise and insight and reap from social marketing all of its inherent potential. The world's social development ills are demanding that social marketers of today and tomorrow be more creative. Manoff calls for them to push their thinking and steer clear of doing things "the expected way." In a loud voice, he calls for new energy.

Complementing his call for action, Manoff devotes considerable attention to detailing the entire process of a well-conceived social marketing effort: problem identification; objective and strategy setting; developmental research; message design; testing; media planning; coordination of forces; and tracking of results. Each step is framed with a view on "how it's done" in commercial marketing, yet is focused on the particular circumstances of the social marketer in the developing world. At times though, the reader may find his critique of the developed world's marketing techniques to be paternalistic and somewhat unfair. Examples from around the world, including four extensive case histories, are illuminating and help the reader to recognize the advantage in following the identified path.

One particularly valuable section deals with designing the social marketing message. Here, Manoff addresses what this reviewer believes to be one of the major factors in social marketing program failure—media messages that are poorly planned and lacking sensitivity to the target's human condition. The reader is exposed to content, design, persuasion, and memorability factors that make the difference between a message that persuades and one that rings hollow. In light of the critical nature of this component of social marketing, it would have been better to have devoted even more space to the discussion of message ben-
(continued on page 19)

Extraneous detail. A government agency in Botswana, which had developed a booklet on the oral contraceptive, recently made changes in a few illustrations because in-depth field tests conducted after they printed and distributed small numbers of the booklet revealed a detail unnoticed during earlier interviews. Respondents were distracted by an image of the back of a man sitting in the clinic window which appeared in each of the pictures showing the clinic. The same illustration of the clinic was used throughout the booklet. When the booklet was reprinted for wide-spread distribution, the man was removed from the window to eliminate the distraction. This illustrates the importance of thorough field testing of a small run of a booklet or flier prior to mass printing.

Time. Messages about time are often difficult to communicate, especially to non- and semiliterate audiences. Groups with whom PIACT/PATH has worked have developed a variety of symbols to show the passage of days, weeks, months, and years. An illustration showing a woman tearing off a calendar page was well understood by Ecuadorean audiences to mean that one month had passed. But in many areas of Sierra Leone or in the Sudan, respondents did not recognize the Western calendar. Consequently other symbols were tested in these countries. Moons in Sierra Leone and moons and stars in the Sudan were identified as the symbols most widely understood to represent months.

In a contraceptive instructional booklet developed in Bangladesh, it was important to convey the message you must "wait 5-10 minutes" after using the foaming tablet. Since most Bangladeshis could not tell time, the artist first depicted the passing of time by showing water boiling. When this was not understood, project staff observed villagers' routines to see if they could find an activity that took 5-10 minutes to complete. They finally tested a drawing of a man and woman sitting on their bed with the man smoking a cigarette. Almost every respondent understood that the man was smoking and waiting. They did not necessarily know why the man was waiting, but they knew that he should wait as long as it took to finish a cigarette.

Text. The same word can have several meanings, and pretesting will reveal when a selected word interferes with message comprehension. When preparing materials to promote breastfeeding in a large New York City hospital, text was tested informing women that, if they know they will be away from home during feeding time, they can "express" their own milk into a clean cup. Although the visual illustration of this process was already understood, when respondents in a pretest were asked to read the texts, some became confused, thinking that the written message had something to do with breastfeeding in the subway (express train) system. When substitute words were used, "you can take breast milk out by hand," the text reinforced the illustration and the message was clear to respondents.

Through pretesting, PIACT/PATH has

learned that there can be a large discrepancy between what materials developers intend to convey and what the audience understands. Pretesting is an essential formative technique that builds upon information gathered during the materials development process, ensuring the message designer that the materials will effectively address the needs of the target audience. ■

Margot Zimmerman is Director of the PIACT/PATH Information, Education and Communications office in Washington, D.C. Lena Steckel is an Assistant Program Officer in PIACT/PATH's Washington, D.C. office.

Please note in "A Communicator's Checklist", DCR #50, a book was reviewed under an incorrect title. *Bibliotech: The 1984/1985 Computer Cookbook* should have read *The 1984/1985 Computer Cookbook*. We regret this error.

Environmental Communication Conference

The Department of Natural Resources and Environmental Quality Board of Puerto Rico are co-sponsoring and hosting the "First Conference on Mass Communications and Environmental Protection in the Caribbean Region."

The three-day meeting will be held in Old San Juan, Puerto Rico from February 3-5, 1986. The dual purposes are to assess the current uses of mass media in this area, and to explore future applications for incorporating mass media into overall planning strategies for environmental management and protection.

Those interested in attending the conference, displaying environmental media materials or audiovisuals, or receiving published proceedings should contact Victoria Dompka, Conference Coordinator, Department of Natural Resources, P.O. Box 5887, Puerta de Tierra, Puerto Rico 00906. Telephone (809) 722-5501.

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Saving Children's Lives: A Communication Campaign in Egypt

By Dr. Norbert Hirschhorn

Diarrheal disease is the remaining major cause of death in Egyptian infants and toddlers under the age of three, accounting for over 60 percent of deaths in those age groups. As late as 1980 it was estimated that close to 150,000 deaths were associated with diarrhea. Studies showed that the great majority of these deaths were due to simple dehydration, "simple"—in the sense that death could have been prevented by proper oral rehydration therapy. Intravenous fluids were available but not to all children, especially in rural areas. Also, mothers were not aware of the dangers of dehydration and brought children into clinics too late. A pilot study proved conclusively that oral rehydration therapy (ORT), promoted by rural health clinics and at home, could reduce diarrhea-related deaths by 50 percent.

It was on the basis of this pilot study that the National Control of Diarrheal Diseases Project (NCDDP) was developed through a program agreement between the Government of the Arab Republic of Egypt and the US Agency for International Development. Signed in late 1982, the five-year project aimed to reduce child mortality from diarrhea by at least 25 percent. Work began in 1983 with the arrival of the technical assistance team from the John Snow Public Health Group (JSI).

Project Description

There are two features of this project that are central to its effective management: 1) the NCDDP enjoys a certain degree of autonomy to the extent that it can reach beyond the Ministry of Health to bring in specialists through grants and contracts, and it has the power to manage its own budget and personnel; 2) the NCDDP is not a group of separate program elements, but an integration of elements in time and concept: training of health workers; production, distribution and marketing of oral rehydration salts (ORS); monitoring and evaluation of the project; and education and promotion via television, radio, and other public media. These aspects are all concurrently active and all are maintained and coordinated through the Secretariat, the technical arm of NCDDP.

The goal of the communications element, the focus of this article, is to teach, persuade, and change the behaviors of (a) all Egyptian mothers of children under three, and (b) other specific target groups, especially health personnel, pharmacists, mass media reporters, and decision-makers involved with the management of diarrhea and dehydration programs.

Planning for Communication

Data acquired through target audience research provides program planners with the

most useful and valid information upon which to build a communication campaign. This holds true whether the activity is to select an appropriate logo to call attention to the campaign, or to determine the most effective channels through which to communicate social messages. The following elements of the NCDDP project were those that required considerable audience research and testing before being integrated into the ORT campaign throughout Egypt.

Logo. Four designs were selected from among ten submitted by independent artists and advertising agencies. Focus groups and brief interviews in public places on these four logos were carried out to determine audience response. The most popular design was again taken out and tested with other focus groups for more specific comments. Changes resulting from this final feedback were the color of the mother's dress from black to white—for cultural reasons; a wedding band drawn onto the mother's finger; a larger spoon; and a smile added to the mother's face (see logo illustration). While responses were being collected on mothers' reactions to the proposed logo, numerous subjective feelings were also being shared with the staff about illness, health care, and the mothers' devotion to children—all useful information for upcoming message design purposes.



Materials Design. Questioning the mothers who participated in focus groups helped project staff determine what amount of fluid a mother would find believable to give to a child with diarrhea. In addition, surveys showed that a 200cc packet of salts would be the most practical size for home use. A plastic cup and spoon were also developed for distribution with the packet.

Naming the Solution. Field research showed that mothers favored simple names that either convey a warm feeling or that describe the *purpose* of the solution. An Arabic word meaning "for cure" (a common blessing upon taking a medicine) was selected, responding to mothers' voiced preference. However, doctors and pharmacists took ex-

ception to this name noting it was not suitable for prescribing purposes. The name finally chosen, *The Solution for the Treatment of Dehydration* served the dual functions of ease of identification for mothers as well as providing a precise prescription name for doctors and pharmacists. People now know it more simply as *The Solution*. Exemplified here is a case where selected audience research told project planners the wrong thing. Although mothers were the primary audience, doctors and pharmacists served as dispensers of the solution and should also have been consulted from the beginning in order to ensure broad acceptance of the product.

Identifying the Product with the Disease. Since oral rehydration does not stop diarrhea, another disease for which the therapy is effective must be identified. That "other" disease is dehydration. One of the problems, particularly in the rural areas, was finding a familiar term to help mothers associate the symptoms they already recognize in their sick children with dehydration. An Egyptian Arabic word *gaffaff*—meaning agricultural-related dryness or drought—was found to best express the concept that project staff wanted to convey. Although use of *gaffaff* in this context is not always understood by all mothers, it does provide health care workers with another means of teaching some mothers to take action more quickly when their children are sick with diarrhea and are dehydrated or in danger of becoming so.

Message Design

NCDDP research into the entertainment and mass communication habits of the Egyptian public, both rural and urban, showed that over 90 percent of Egyptians have access to radio, and over two-thirds to television (over 90 percent in urban areas). This argued for assigning radio and particularly TV central roles in the dissemination of educational messages about diarrheal disease, and TV advertisements were developed.

TV Production Sequence. Diarrheal disease experts were first consulted to learn the facts about the disease. Egyptian pediatricians and medical professors were then brought in to review the medical facts within an Egyptian context and to modify recommendations for the target audience. A "story board" (illustrations of visuals comprising the proposed TV ad) was then designed. Egyptian pediatricians were asked to review these for accuracy. At this stage of development, anthropologists took the "story board" and the accompanying script to villages and used focus groups and one-on-one techniques to solicit comments. After selected changes were made the TV ad was produced and reviewed by diarrheal disease experts and Egyptian pediatricians. This

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final film was *not* pretested; instead, an intensive post-campaign evaluation of the first broadcast campaign, timed for release in January-February 1984 as a pilot during the non-diarrhea season, was used to gather target audience reactions. The NCDDP ads have subsequently been found to be the most remembered of *any* public or commercial ad according to the posttests following the second and third campaigns in the summer of 1984 and 1985.

TV Testimonial Personality. Television history was made with the production of these ads. It was the first time a famous person was used to deliver a social-oriented message and only the second time the testimonial format was used on TV. The first pilot commercials featured the actor-comedian-social commentator, Fouad El Mohandes, known widely to children as "Uncle Fouad." Although "Uncle Fouad" was well received by a majority of mothers with young children and the commercials effectively transmitted the intended messages, the response was *powerfully negative* in five to eight percent of mothers surveyed. More importantly, doctors overwhelmingly rejected the image, asking "How can a comedian teach about medicine?" Even when "Uncle Fouad" was paired with an eminent physician, doctors persisted in rejecting this image.

This strong negative response called for a very different image to regain the confidence of the medical profession. To accomplish this, a well-known "motherly-appearing" actress was selected—Karima Mokhtar, who plays in soap operas and movies in Egypt. Her role as an advisor/counselor in the ads proved highly acceptable among medical professionals and mothers alike.

Physicians, Pharmacists, and Nurses. Messages were designed as much for medical professionals as for mothers. Radio and television's "leveling" effect means *everyone* receives the same message, giving doctors, nurses, and pharmacists the opportunity to know what the general population knows. It provides them with a base upon which to continue educating their patients/customers. Health workers were also provided with a flood of well-produced professional materials (posters, a newsletter, scientific brochures) that were equally appreciated as there is generally a shortage of good resource materials for medical professionals in Egypt.

Results

What was the impact of this intense, nationwide campaign to reduce infant mortality related to diarrhea, and could such an impact be attributed to effective communication planning? Between early 1983 and late 1984, knowledge of dehydration rose from 32 percent to 90 percent; knowledge of ORS rose from 1.5 percent to 96 percent. Ninety-eight percent of all Egyptian pharmacies have ORS available and it is now the leading sale item (in volume) of all diarrhea-related drugs according to a survey of 300 pharmacists nationwide. Careful documentation shows that mass media alone increased the use of ORS from one

percent to nearly 70 percent of episodes. Statistically significant, mortality reductions in children under two have been documented nationwide, approximating a 50-percent drop in diarrhea-associated deaths, concomitant with project activities. Monitoring of all process and outcome measures continues. The success of the NCDDP project in Egypt indicates that mass media can help change behavior, but that all other elements of a mass campaign must be equally well-planned and coordinated to achieve this success. ■

Dr. Hirschborn is a lecturer at Harvard University's Department of Preventive and Social Medicine. He has had worldwide experience in implementing diarrheal control programs and in training health workers in maternal child health and development.

(NCBC continued from page 5)

Surveying was based on issues identified earlier by the Ministry of Health as most severe for the population overall including: protein-energy malnutrition in three age groups—infants 0-4 months, infants 5-8 months, and children 9-24 months old; infant diarrhea and dehydration; vitamin A deficiency; undernutrition of pregnant women; and undernutrition of women during lactation. The NCBC explored these problems in a subsample of the participating villages. A survey sheet of media habits was completed during the initial interview with mothers and at all focus group interviews.

The Communication Strategy

The qualitative investigation identified the need for change or reinforcement in particular nutrition-related behaviors. The target audience of mothers was segmented according to their needs during designated maternal stages and by the age-related dietary needs of their children under three years of age. This meant only immediately useful information would be directed to mothers in these categories.

The research showed that the cost to mothers of following the advice was at the most a few rupiahs (cents) more than they normally spent per day and was affordable for over 90 percent of the sample. Due to severe constraints on the mothers' time, most of the recommended behaviors demanded a small additional investment of their time; those that required extra time offered a substantial and perceptible reward.

Radio was available in many homes in the project areas, so broadcast messages were integrated into the project as an additional means of reaching mothers. The radio spots, besides bringing nutritional messages into the home, also identified *kaders* as a crucial source of information for mothers and children, thus increasing their prestige in the eyes of mothers.

"Action Posters" were designed to meet several strategic needs; first, to reinforce the *kaders'* advice in areas not reached by radio; second, to ensure accurate delivery of the

messages at weighing sessions and home visits. A poster was designed for each segment of the target audience. The name of the target group was printed at the top of each poster and large, step-by-step illustrations of the recommended practices were featured below. A column of boxes under each illustration allowed mothers to record their compliance with the recommendations over a month's time.

The project also addressed the *kaders'* expressed lack of confidence. They were trained how to use the educational materials that would be taken to mothers' homes. At weighing sessions *kaders* selected a poster according to the age of the child, then counseled the mother on what she should do, using the poster as a visual aid for her and as a reminder of the advice that should be given during this session. Thus, the posters served to reinforce the advice to mothers once they returned home, and to reinforce the *kaders'* training. Delivering the posters to the homes of mothers also gave *kaders* a purpose for making the visit since it provided them with something to offer in exchange for the mothers' time.

Project Evaluation

Addressing the same nutrition problems as the national program and operating with virtually the same activities and tools, the NCBC project achieved significantly different results. The 1981 evaluation showed that the social marketing approach had improved the nutritional status significantly in the target populations. Significant improvements in food intake and the nutritional status of the target populations, the ultimate tests of the strategy's effectiveness, were also recorded and could be attributed to behavioral changes stimulated by the project. These changes were reflected in: higher protein and calorie levels for project children and breastfeeding mothers; higher consumption of the the recommended foods by project children; an improved nutritional status for 40 percent of children in the project; at 23 months, an average weight of 1.5 kg, higher for project than nonproject children; and a significantly better growth rate in each experimental area for project children after five months of age.

In addition, project *kaders* offered more accurate, specific, and complete dietary advice to the target population than a sample of nonproject *kaders*. The evaluation also pointed to higher levels of performance by the project *kaders* than by their counterparts in nonproject communities in terms of community outreach and broader and more consistent coverage.

Cost Analysis

The NCBC case illustrates how the social marketing approach to educational programs fits the needs, resources, and desires of program participants. Social marketing made the fit possible by producing messages that addressed the most pressing nutrition and health problems with suggestions for practices that mothers could carry out and sustain (continued on page 19)



A Nutrition Prescription for the Dominican Republic

The Applied Nutrition Education Project (ANEP) of Caritas-Dominican Republic and Catholic Relief Services works with families in 90 low-income Dominican communities to improve the nutritional status of children. This is done by encouraging families to better feed and care for children, and through community action projects to increase food production and sanitation.

From the outset, ANEP has placed prime importance on education and community promotion, seeking to develop a comprehensive communications strategy that reflects community needs and abilities. In designing the ANEP strategy, the lessons of Indonesia's Nutrition Communication and Behavior Change Component were applied, and the benefits of growth monitoring as a pivotal nutrition communication activity were exploited. Other ways in which ANEP reflects the Indonesian experience: its strategy is based on community participation through qualitative research, albeit through focus group rather than individual interviews; communication and education are the primary interventions; individual counseling in conjunction with growth monitoring plays a key role in the communications

strategy; and education materials can be adapted by health promoters to meet individual needs. The project has produced promotional materials, materials for group education, materials to stimulate community action activities, and materials for individual counseling at growth monitoring sessions. The primary audience is mothers with children under five years of age.

ANEP has gone further with individual counseling than either the Nutrition Communication and Behavior Change Component (NCBC) of Indonesia or the Indonesian Family Nutrition Improvement Program (UPGK) by providing a tailored method and the tool for adapting the method to the mothers' individual resources. For personal counseling, a set of 12 laminated pictures, *portalaminas*, was produced to guide health promoters in counseling mothers at weighing sessions. Each 11 x 14 inch *lamina* has graphics on one side and a message for one of four segments of the target audience on the other. The project designed two *laminas* for each age group: one for children who have gained weight, and the other for children who haven't. Mothers of children who have gained weight are congratulated and encouraged to continue feeding as

before. Promoters spend only a few minutes with these mothers. More time is spent with mothers of children who have not gained weight. In addition to offering these mothers specific suggestions for actions they should take, promoters ask the mothers how many of the recommendations they can actually carry out. As a reminder to these mothers of what they should try at home, ANEP developed take-home worksheets for mothers of non-gainers. Each worksheet has illustrated recommendations for a target group at the top of the page and boxes at the bottom. For example, a promoter asks the mother of a 9- to 23-month-old who has not gained weight whether she can realistically feed her child the recommended four meals a day. If the mother says she can only manage three, the promoter circles three of the four illustrated feedings and asks the mother to punch a hole in, or to mark the boxes as she follows the advice. ■

Communications assistance has been provided by Marcia Griffiths of Manoff International, and two consultants to the International Nutrition Communication Service.

Distance Teaching Course Offered

A four-month course on distance teaching and its relevance for Third World countries will be held from April to July 1986 by the International Extension College and the Department of Education in Developing Countries of the University of London Institute of Education, at the Institute in London.

Course objectives are to analyze an educational problem in a participant's country and determine whether distance-teaching methods are appropriate to it; to make reasoned and informed choices between different methods of distance teaching; and to work out administrative arrangements for a distance-teaching system.

All participants should be graduates or trained teachers or have adequate relevant experience, have not less than six months' experience of working full-time in distance teaching or extension, and have a thorough command of English.

Application deadline is February 17, 1986. For further information and application forms contact: Departmental Secretary, Department of Education in Developing Countries, University of London Institute of Education, 20 Bedford Way, London WC1H 0AL, U.K. Telephone 01-636-1500.

PROGRAMA DE EDUCACION NUTRICIONAL APLICADA
CARITAS DOMINICANA 1984

Worksheet for mothers of children 9-23 months of age who have not gained weight. Messages: Give the child the same food as the family eats. Give the child one more meal and a snack between meals for a total of four meals a day and two snacks. Continue breastfeeding.

and a five-year stock of spare parts. A key element has been involvement from the beginning of GTC, whose technicians have been used to install and maintain the equipment under a contract with the Ministry of Health (MOH). Since the GTC and MOH have collaborated from the start, each has an equal stake in seeing the MEDEX network develop successfully. Additionally, continuity was ensured by involving the same technical assistance team throughout the planning and installation stages.

All medex are trained in the use, care, and maintenance of their radios in an intensive one-day training session. Each medex receives an illustrated training manual and a set of maintenance tools. They are taught how to communicate effectively over the radio and how to fill out the logs of all calls sent and received. Georgetown headquarters analyzes the logs to determine the use and reliability of the network.

A key person in the network is the full-time communications officer at MEDEX headquarters in Georgetown, who is responsible not only for communicating with the medex and controlling traffic on the network, but also for following up on their requests. This officer must locate a physician when an emergency call is received, determine the status of patients transferred to Georgetown or of delayed drug shipments, and provide other information upon request. The competence and dedication of this officer is vital to the successful operation of the network.

Radio Use

Medex keep their radio in their office and generally have it on "receive" mode for incoming calls from 8:30 a.m. to 4:30 p.m., Monday through Saturday. An analysis of logs during the first quarter of 1985 showed that 62 percent of all calls were for administrative purposes, such as to coordinate transportation needs, order drugs and supplies, supervise field personnel, and schedule health care personnel meetings. About 23 percent of all calls were related to medical uses such as consultations between field medex and doctors, continuing education, patient referrals and follow-up, emergency evacuations, or malaria control. Messages transmitted for community residents or other national agencies comprised the remaining 15 percent.

The pattern of radio use varies depending upon regional needs. Medex in remote locations rely more heavily on their radios than do their counterparts stationed where transportation and communication links are better. Medex in the hinterland, on the average, used their radios 1.5 times as much for administrative purposes as did medex in coastal or *river-ain* areas, and twice as much for medical purposes.

Between 1980 and 1985, administrative uses of the network increased from 44 to 62 percent of all traffic while medical calls declined in volume from 31 to 23 percent. It should be noted that the absolute number of calls in all

categories has, however, increased with the expansion of the network.

In addition to the already discussed radio traffic, MEDEX headquarters uses two-way radio (TWR) to provide consultative and educational support to their field workers. A bi-weekly program in continuing medical education provides inservice training at a distance. Every other Saturday Georgetown conducts a medical clinic by TWR. Brief lectures are delivered on field-generated topics such as malaria control and infant diarrhea. When a clinic has finished, medex are encouraged to ask questions and to discuss relevant community cases. Two weekly conference calls update medex on administrative actions, and a Georgetown operator calls each station once a week to conduct an equipment check.

Impact of TWR

Two-way radio has greatly improved rural primary health care delivery. It has substantially eased the coordination and management of remote medex locations. Administrative matters are also handled much more efficiently than before, particularly when requisitioning supplies and drugs.

Previously, drugs were ordered by mail or by messages passed through other government agencies. Medex often had to wait weeks for a reply, only to travel to Georgetown for follow-up. Such activity resulted in considerable expense to the MOH and in a temporary loss of medical services to rural communities. With TWR, medex can now follow up on administrative matters without ever having to leave a site.

TWR has also greatly improved the coordination of emergency evacuations. Transportation can be immediately arranged, referral centers alerted to the patient's impending arrival, facilities prepared, and a physician placed on call. In the past medex were forced to leave their patient and travel to the closest available radio, resulting in delays of hours or days—sometimes at the cost of a patient's life.

It should be noted, however, that while TWR can communicate the immediacy of a situation, poor roads and unreliable transport still limit the extent to which a medex can respond to community medical needs. Emergency evacuations which may now be coordinated in a matter of hours along the coast, may still be impossible during the rainy season in the hinterland.

Morale among medex has improved, particularly for those in more isolated stations. Medex report that their confidence grows as regular consultations and continuing education support enables them to provide better health care for their area. With TWR, medex have immediate access to a qualified doctor for consultation on diagnosis and treatment. Previously this was done by letter or personal visit. Medex also express enthusiasm about the value of the continuing education programs which keep them better informed than was possible before the installation of the system. In addition, medex feel that their status in the community has improved because of TWR. In many communities the network provides the only channel for communicating.

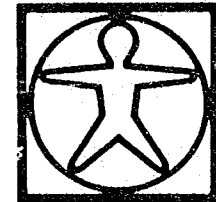
Conclusion

While need for and use of TWR seems to be greatest in remote locations, its utility remains constant throughout the network. Benefits of the system include:

- increased access to knowledgeable persons for administrative and managerial matters;
- improved supervision of field paraprofessionals;
- increased opportunities for medical consultation, patient referrals, and clinical follow-up;
- improved reporting of and response to emergency situations;
- increased communication between medex, community members, and other government agencies.

The benefits of the medex two-way radio system exemplify the important role telecommunications can play in the development process. Use of telecommunications for administration, supervision, coordination, consultation, and education can lead to improvements not only in the quality of rural health care, but also in supporting education and agricultural extension services. As the Guyana experience demonstrates, rural communications can contribute to improving the quality of rural life in the developing world. ■

Michelle Fryer is a specialist in uses of radio for education. Dr. Burns is Associate Professor, Department of Electrical Engineering, Iowa State University; Dr. Hudson is Associate Professor, College of Communication, University of Texas at Austin.



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potential uses for the volume. The format of the book is described, and selected lesson plans from the *Sourcebook* are presented: (a) Eating Good Food to be Healthy; (b) Night Blindness and Sick Eyes; (c) Eating Nutritious Foods for Healthy Eyes; and (d) Planning a School Garden. Appended are charts outlining the contents of the sourcebook, including topics and lesson presentations in each section, and related lessons in other subject areas are indicated for each key topic. Available from EDRS in microfiche for 97 cents or in paper copy for \$7.40. ■

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Kenya's Radio Language Arts Project: Evaluation Results

by Rebecca L. Oxford

The Kenyan Radio Language Arts Project (RLAP) assessment has just been completed, documenting the effectiveness of interactive radio-based educational instruction. Analyses in the areas of listening, reading, speaking, and writing demonstrate the sometimes surprising results that children in radio classrooms consistently scored better than children in nonradio classrooms in *every* test.

The spring issue (#49) of *Development Communication Report* contained several articles describing various features of the RLAP that ran from 1979 to 1985. The project was sponsored by the Office of Education, Bureau for Science and Technology of the U.S. Agency for International Development and was conducted by the Academy for Educational Development in cooperation with the Kenya Institute of Education of the Ministry of Education, Science, and Technology. An evaluation of the project was carried out with the assistance of the Center for Applied Linguistics (CAL). Evaluation results came from a variety of sources, including language tests, observations, interviews, demographic and administrative records, and an attitude survey.

The Setting

A large proportion of the project's students were considerably transient. Only 22 percent of the total student population of 3,908 were "normal progression" students—that is, they advanced regularly through their education during the life of the project. Students who moved from the area, failed a standard (grade), dropped out, or were otherwise untrackable, comprised the remaining 78 percent of the total. Seven districts were included in the project—each district being represented by three schools. All the schools were located in rural areas, but their physical accessibility varied widely. Project staff rated radio reception as excellent in 79 percent of the schools, problematic in 18 percent, and poor in 3 percent.

The average age of teachers across all districts was 31.7 years, and the average age of headmasters was 38.3 years. While all headmasters in the summative evaluation were male, project teachers were mostly female. Teachers averaged 9.4 years of experience, and headmasters had served an average of 10.1 years in that position. Teachers had received an average of 9.8 years of education and headmasters 10.7 years.

Test Results

Tests were developed for listening and reading in Standards 1, 2, and 3, and in speaking and writing in Standards 2 and 3. The achievement tests were based on the official Kenya curriculum for those standards, so as to

measure achievement against the curriculum. Nearly all the differences were highly significant statistically, with a probability of less than 1 in 10,00 that the findings could have occurred "by chance."

Table 1 shows the performance of all project students. The most striking difference is in average listening scores: Standard 1 radio students scored nearly eight points higher than did their counterparts in the control group; Standard 2 and 3 radio students outperformed the control students by 4 points. These findings indicate that the interactive radio method, which emphasizes listening, resulted in greater learning gains by radio students. Similar findings, with somewhat higher averages for both groups, were found in analyses of students who progressed regularly through grades during the project.

Somewhat more surprising is the fact that the radio group also consistently outperformed the control group in reading, writing, and speaking. In these skill areas, the radio versus control group differences, while not always large, were statistically significant. In addition, although radio students did better than control students in writing, neither group performed particularly well in that subject.

This analysis also indicated that there was a positive relationship between the average number of years of teachers' teaching experience and higher achievement scores among the students.

Positive Attitudes Prevail

Unstructured interviews and observations were conducted by the RLAP field staff. Overwhelmingly positive attitudes about the project prevailed among project teachers and headmasters. One school offered to buy its own batteries if the project staff would provide the taped lessons so the children could continue using this method after the project ended. In another school, the project staff

found a teacher following the radio teachers' notes and using many of the radio lessons in her conventional classroom not equipped with a radio.

A formal survey conducted in 1984 also indicated highly positive attitudes toward interactive radio instruction in general. Eight of every ten teachers and headmasters felt that radio instruction was very helpful, while nearly all respondents felt it was somewhat helpful. Students' reactions to radio instruction were rated as positive by 91 percent of the teachers and 100 percent of the headmasters. Radio lessons were viewed as either good or excellent by 85 percent of the teachers and 97 percent of the headmasters. Educators generally felt that radio students performed better than other students in all four language areas, with greatest strength in listening and speaking. Both teachers (by 91 percent) and headmasters (by 97 percent) preferred teaching English with the radio. Eight out of ten teachers and nine out of ten headmasters said that radio instruction improved teaching skills. Nine out of ten teachers and headmasters wanted to continue using the radio lessons after the end of the project.

Significant Observations

Although the primary purpose of performing this analysis was to produce summative evaluation results, project staff members made some informal observations as they gathered formative data:

- The radio method forced systematic implementation of the Kenya curriculum.
- Good teachers mastered the technical details of the radio method and were able to "individualize" radio instruction to help children of different ability levels.
- The highly interactive nature of the instruction increased the frequency of student re-

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Table 1
Summary of RLAP Instruction Raw Score Results:
All Students

Standard	Reading		Listening		Writing		Speaking*	
	Radio	Control	Radio	Control	Radio	Control	Radio	Control
1	13.1	10.7	23.4	15.5	—	—	—	—
2	14.6	13.1	15.3	11.2	2.8	2.3	WT 76.1 M 34.3 G 15.9	67.7 29.0 14.0
3	22.9	19.1	25.7	21.6	2.7	2.1	WT 120.2 M 46.4 G 20.7	114.1 39.1 16.5

*Speaking test used a 10% sample of all students.

Subtests included Word Total (WT), Meaning (M), and Grammar (G).

sponses and the amount of time spent working on language tasks.

- Fewer discipline problems occurred in radio classrooms than in regular classrooms.
- Three times as much English instruction was presented in any half-hour block by radio than by conventional teaching means.
- The radio method, unlike the conventional method, used almost every item in the Kenya curriculum.
- Radio students appeared to have more self-confidence and enthusiasm than nonradio students.

Conclusion

With the conclusion of this assessment phase of the Kenyan Radio Language Arts Project, solid data now exist to document what participating teachers, administrators, project planners, and even students have said about this experimental project—it works. In fact, it works so well in all four language skill areas, particularly in listening comprehension, that instructors wanted to see the radio lessons continue after the experiment ended. ■

Dr. Oxford is an educational psychologist at the Center for Applied Linguistics and has a consulting firm, O-C Associates, Inc.



Interactive Radio Education Film Available

A twenty-minute film and videocassette, *Radio, the Interactive Teacher*, is now available for rental from the Clearinghouse. It documents the application of an innovative, radio-based instructional methodology to teaching English to rural Kenyan school children. (See *DCR #49* for a full account of the methodology and several adaptations in other developing countries.)

The color film is available in 16 mm film, 1/2" Beta, NTSC; 1/2" VHS, NTSC; or 3/4" U-Matic, NTSC in French, English, and Spanish. Rental fees are: US\$10 for domestic requests; US\$20 for foreign requests. Please send your order with a check or money order in U.S. dollars made payable to:

Clearinghouse on Development Communication
1255 23rd Street, N.W.,
Washington, D.C. 20037, U.S.A.

On File at ERIC

All of these documents are available in microfiche or in paper copy from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22304, U.S.A. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping costs may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.

• *Health Education Training Model. Training for Development. Peace Corps Manual No. T-11. 1983. 77pp (ED 254 659)*

Intended for preservice and inservice training of Peace Corps Community Health Volunteers, this selection of health education training materials presents a model designed to help community health workers become better facilitators and educators as they help motivate people toward a healthier and more self-reliant life. The introduction provides suggestions for preparing for and carrying out the training program. The twelve sessions focus on: defining expectations and clarifying objectives of health education training; beginning the program; looking at community health and education; exchanging ideas about health education; working with a group; how people learn; the role of the Peace Corps volunteer as a community health worker; identifying community needs and resources; teaching about important health issues; developing and using appropriate teaching aids (one session on story telling and one on creating low-cost materials and equipment); and the Health Fair. Information provided for each session includes objectives, an overview, lists of resources and materials, preparation, activities, and handouts. Appendices include information on working with a group, evaluation ideas, a calendar for a ten-day training program, and a listing of selected resources and references. Available from EDRS in microfiche for 97 cents or in paper copy for \$7.40.

• Moore, Thomas J. and others, eds. *Communicating with Mexican Americans. For Su Buena Salud = Comunicando con Mexicano Americanos. For Their Good Health. Proceedings of the Conference (Houston, Texas, September 13-14, 1979). 152 pp. (ED 249 036)*

This conference focused on the role of the Mexican American's language, tradition, life style, health practices, and media utilization in the design of effective education and information programs. Representing various local, state, and national health, education, and media organizations, the 108 participants attended sessions on socio-cultural factors, health values, and perceptions that affect health communication, as well as the use and evaluation of media in disseminating health information. This study involved the design of a model health communications campaign to educate the Mexican American community about services provided by a health maintenance organization for cardiovascular disease. A media critique session provided participants

with guidelines for content and production to use in designing health communication materials. Topics of the research presentations included the assessment of Hispanic knowledge, attitudes, and practices related to cancer for the purpose of education programs; alternative methods for presenting bilingual health education messages; and a videotape package on cancer health education designed to reach Hispanics. Available from EDRS in microfiche for 97 cents or in paper copy for \$12.65.

• Colle, Royal D. *Communication Planning for Effective Nutrition Programs. 1983. 36 pp. (ED 149 937)*

Primary health care and nutrition have been linked with communication in a variety of well-publicized projects. This partnership between communication and nutrition was made necessary by the conflict between an expanded demand for services and limited resources for meeting the demand. Senior officials have a substantial role to play in seeing that their programs gain the full benefit of what an effective communication program can offer by accepting the responsibilities of: (a) examining the implications for communication of any program while it is in the planning stages; (b) insisting that communication or education people work within the framework of a communication strategy; and (c) providing communication resources. In planning, steps should include policy formation and development of a comprehensive strategy to meet program goals. With an understanding of the policy and comprehensive strategies that govern a project's overall efforts, communications specialists should start a process that includes analysis, strategy, implementation, evaluation, and next-step planning. Program officials should insist that top communication managers deal explicitly with the elements of principal objectives, best tentative solutions, audiences, media channels, theme/messages, and schedules. A summary chart of communication and education techniques includes methods, their advantages and disadvantages, and comments. Available from EDRS in microfiche for 97 cents or in paper copy for \$3.90.

• Van der Vynckt, Susan, and Ellen Barclay. *The Unesco Resource Pack for Nutrition Teaching-Learning: An Introduction to Volume 1. Nutrition Education Series 8. 1984. 89 pp. (ED 254 495)*

This guide provides an introduction to the *Unesco Sourcebook for Classroom Nutrition-Learning*, which is designed for both actual classroom use and teacher-training support material, with lesson plans, teaching methods, and learning activities. Nutrition information is presented in such a way that important concepts are not limited to nutrition and health classes, but can also be integrated into different subject areas within the general school curricula, including science, language arts, mathematics, social studies, and agriculture, as well as school meals. Lessons, which are provided in each subject area to cover related nutrition and health topics, include instructions for both student- and teacher-made instructional materials. This introduction to the sourcebook first presents a brief list of some

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A Guide for Primary Health Care: The MEDEX Series

by Richard A. Smith, John Rich, and Sunil Mehra

Since its publication in 1983, *The MEDEX Primary Health Care Series* has been distributed extensively, and today functions as a practical and flexible management and training device for new or existing primary health care (PHC) programs at various levels in 53 developing countries.

The 35-volume *MEDEX Series* was developed over an eight-year period by The MEDEX Group at the John A. Burns School of Medicine, University of Hawaii, numerous developing countries, and supported by the U.S. Agency for International Development. The primary health care techniques and educational materials found in this series were field-tested in Micronesia, and used in PHC programs in Thailand, Guyana, Pakistan, and Lesotho. It has taken the most important considerations in the development and expansion of PHC services and put them into a consistent and easily adapted format for developing countries. The *Series* can be used by planners, administrators, or trainers.

The materials are divided into curative, preventive, and promotional aspects of health care. The training curriculum is problem-oriented and therefore includes only information essential to training the worker to do his or her job. Sections within the *Series* cover: Systems Development Materials; Mid-Level Health Worker Training Materials; and Community Health Worker Training Materials. Currently, the *Series* is available only in English, although some sections have been translated into Spanish, French, Bengali, and Thai.

Since September 1983, this series has been requested and sent to 114 countries. Described in *World Health Forum* as "a total teaching system," it has been distributed to government ministries, nongovernmental organizations, private consultants, nursing schools, and other institutions and programs that are training health personnel and managers of primary health care services in developing countries.

Correspondence with health care professionals in 53 of the 114 countries indicate that the *Series* is being used in 267 PHC programs and projects of varying sizes in developing countries. Further documentation about applications of the *Series* is being gathered from a questionnaire sent to recipients of the manuals. A network of users of the *Series* is being developed as well, to expand its use through the sharing of adaptations, changes, and translations. Further communications and visits to selected sites where materials are in use are also being planned.

Recognition that nurses should play a particularly important role in PHC has led to significant interest on the part of international and national nursing organizations. The MEDEX Group has recently received requests for the *Series* from 31 nursing schools in eleven additional countries interested in revising nursing curricula to reflect a reorientation toward primary health care.

Projects with sectoral interests such as oral rehydration therapy, immunization, nutrition, and community sanitation, have used the materials to strengthen their own efforts. An example is a set of learning packages produced by WHO/UNICEF to be used in 17 countries. One quarter of the materials contained in the packages were taken directly from the *MEDEX Series*.

India's National Institute of Health and Family Welfare has used parts of the *Series* as the basis for management training, to be conducted nationally in over 50 training institutions for doctors, nurses, and other PHC health personnel. Another example of its versatility was its use as a guide for designing and building a health center in Burkina Faso that would reflect the needs of that facility.

During the past two years, information about the availability of the *Series* has been spreading worldwide. To strengthen this process, the MEDEX Group continues to provide copies upon request in an effort to extend the growing network of users.

For further information about this series contact: The MEDEX Group, John A. Burns School of Medicine, University of Hawaii, 1833 Kalakaua Avenue, #700, Honolulu, Hawaii 96815, USA.

Terry Peigh is a Vice President of Foote, Cone & Belding Communications, a worldwide commercial advertising firm. He is an instructor at the University of Chicago's Community and Family Study Center, and has co-authored two books on mass media for social development.

Dr. Smith, John Rich, and Sunil Mehra are with The MEDEX Group, University of Hawaii School of Medicine. Smith is the Director of MEDEX, Rich is a Curriculum and Instructional Development Specialist, and Mehra is a Communications Development Specialist.

Available for \$32.95 from CBS Educational and Professional Publishing, Order Dept. 383 Madison Avenue, New York, NY 10017, USA.

as often as three or four times a day. It helped the project find the most effective channels to deliver this information to mothers at the time they would be most responsive to it, and make these mothers aware of where they could find help. Finally, it helped the project develop an integrated media strategy and materials that would expand the effectiveness of each resource.

Marcia Griffiths is Senior Vice President of Manoff International Inc. Elizabeth Nobbe is Project Administrator and editor at Manoff International/Washington.

(Manoff continued from page 11)

efits. All too often, the inexperienced social marketer will create a message that is rich in detail but lacking in *human benefit* for the target audience. As social marketers, we must never lose sight of the reality that our target audience will only follow a suggested course of action if we convince them that it will make their lives or that of their families *easier, better, or richer*. In a family planning message, for example, "having fewer babies" is not an easily identified benefit, but "having a better life for the current children" is. Or recommending that you boil river water before using it because "doctors think you should," does not personally appeal to affected persons, whereas saying "the prevention of painful, life threatening illnesses" does present a real, human benefit to those who follow the practice. To lose sight of the actual benefit is to fail in communicating our message; and to fail is to waste an opportunity for social development.

Manoff nicely augments the instructional section of his book with invaluable lessons learned from his extensive work in the field. He includes, for example, well-honed insight on selecting a target audience and avoiding the common error of aiming at too broad an audience. Another lesson deals with the synergistic value of linking a social development program to other societal issues (e.g., family planning linked to child nutrition).

Social Marketing: A New Imperative for Public Health should come to be a valued addition to the library of social marketing students and practitioners worldwide. Appreciation for the work will result from its road map of the social marketing process, showing us not only the direction to travel, but also the hazards to avoid. I suspect it will also be valued for its sense of dedication and honesty to the practice of social marketing. But perhaps most importantly, Manoff's new book should be held in esteem for its voice of appeal, its rallying cry to health practitioners around the world. The current era of health education demands new and "better methodology to enlarge its reach and impact." Social marketing, with its tie to mass media and its proven success, is such a "new and better" methodology—a new opportunity that should be seized *now* to help all nations deal more effectively with their health problems.

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The Colombian National Immunization Crusade: Coordination and Communication



This is "Pitin," a cartoon character symbolizing a healthy, happy, immunized child, who served as mascot in a 1984 Colombian mass immunization crusade.

In 1984 the Colombian National Health System coordinated a massive immunization crusade in order to vaccinate as many children in the country as possible against a number of common childhood diseases. Collaborating with the Colombian Government were the Pan American Health Organization/WHO, UNICEF, and UNDP. The communication strategies that were designed for this crusade helped the Health System to successfully vaccinate over 800,000 children on three separate days.

The possibility of a mass immunization campaign was first discussed during Colombian National Health Week in April 1984 with the idea of building on the initial child immunization activities that occurred during that week. Just two months later, Colombia launched a nationwide crusade to immunize nearly one million children under the age of four against diphtheria, measles, polio, tetanus, and whooping cough on three designated days: one day each in June, July, and August of 1984.

In order to accomplish this ambitious goal, Colombia had to organize and mobilize its resources to overcome the kinds of shortcomings that may be found in large scale campaigns, such as a lack of coordination of personnel, communications, transportation, or financing.

Channeling Strategy

The need to involve multiple communication channels was recognized from the start. Before the Crusade began, the Ministry of Health, with assistance from the Pan American Health Organization and the World Health Organization, developed a channeling strategy. This strategy established an aggressive child identification process through direct health promotion activities. Health workers accompanied by community leaders visited households before each vaccination date to spread news of the Crusade, and more importantly, to identify children needing immunization. They collected information on each child such as name, age, sex, address and vaccinations needed. Children were then "channeled" to the appropriate health facility for vaccination on the prescribed dates. These visits provided important personal communication between individual households and the health centers or health posts during the Crusade. The channeling strategy also facilitated the evaluation phase since children's vaccination progress was tracked through the end of the Crusade. The impact of the Crusade was therefore more

more easily measured both during and after the vaccination activities. Also, since records were kept on each child, the strategy allowed for follow-up vaccination of those children with incomplete schedules.

Getting Started

Communication of technical procedures was carried out by the Colombian Red Cross. More than 13,000 Red Cross members were trained as vaccinators. Sixteen thousand volunteers were trained in the channeling strategy and immunization techniques or received instruction in technical and administrative procedures, such as cold chain standards, organization of health posts, and record keeping. A booklet on technical and administrative norms was developed and distributed to more than 10,000 vaccination posts, and training in these standard procedures ensured uniformity throughout the country.

"... the press, TV, and radio played a major role in dramatically increasing the outreach capability..."

During the Crusade, both information and evaluation reports were distributed. Information reports were released every two hours on vaccination days, summarizing data on the number of children vaccinated in each health post. The mass media stimulated the Crusade by broadcasting these reports which fostered a wholesome rivalry between the different localities. The evaluation reports provided information on the results of the Crusade at the local, regional, and national levels.

Many political and social groups were called upon to extend the communication network established for this national effort. The President and the First Lady actively promoted the Crusade by conducting inauguration ceremonies on each of the three vaccination days at the Presidential Palace. The Ministries of Health and of the Interior sent representatives to municipalities to encourage their cooperation and support of health personnel. The Ministry of Education solicited departmental directors and over 200,000 teachers to help disseminate promotional materials. Air, sea, and river transportation was provided by the Ministry of Defense to deliver vaccines and set up vaccination posts in remote areas. The Catholic Church provided motivational materials, organized activities, and distributed messages about child health and immunization before the start of the Crusade. Other private,

volunteer, and recreational groups offered financial support for publicity, transportation, and mobilization of community members at the local level.

Mass Media Contributions

Mass media made a fundamental contribution to the accomplishments of the Crusade. The press, television, and radio played a major role in dramatically increasing the outreach capability and focusing the population on child health and development. For example, Colombia's largest newspaper, *El Tiempo*, using the Crusade's mascot, Pitin, carried health messages to its largely urban readers, and alerted them to the upcoming vaccination days. Many other newspapers followed suit and adopted Pitin in their articles, helping to further spread the news of the Crusade. Calendars showing Pitin next to the vaccination dates were printed and distributed. Other printed materials such as growth charts with child immunization records, information on breastfeeding, nutrition, and treatment of diarrheal disease were developed and made available to parents at the vaccination sites. News programs on the national television and radio station carried stories of the Crusade efforts that reached an estimated ten to twelve million people. Well-known entertainers broadcast hourly appeals to parents to bring their children in for vaccination. The radio also carried hourly Crusade updates and encouraged people to participate. Other television and radio stations broadcast similar messages and programs to urban and rural areas assuring extensive coverage throughout the country.

Results

The results of the Crusade are impressive. During the first vaccination day 804,053 children, or 87.6 percent of the target group, came for vaccinations. The second day of vaccinations brought in 854,570 children, or 93.1 percent. During the third and final round on August 25, 1984, 860,000 children, or 93.7 percent of the target group, were vaccinated.

The statistics clearly attest to a well-planned and executed campaign. The role that communications played in educating and mobilizing a large portion of the Colombian population was unquestionably a central factor in making the Crusade a success. ■

This article was adapted from *Assignment Children—A Journal Concerned with Children, Women and Youth in Development*, 65/68, 1984, UNICEF, by Robert J. Vittel, Information Assistant, Clearinghouse on Development Communication.

In recent years, considerable research has been done on visual literacy and how to use visual materials effectively in developing countries. We are devoting a section of this issue to the purpose of visuals, how to use them in training, and how peoples' understanding can be improved through appropriate exposure to and use of these materials.

The Purpose of Visuals

by **Ralph Wileman**



A visual aid is a device through which the learning process may be encouraged or carried on through the sense of sight. Visual aids can take many forms: they may be real objects, models, printed illustrations, photographic prints, filmstrips, video, or motion pictures. A visual often incorporates graphic devices (such as an arrow to direct the viewer's eye to a specific part of an object), as well as words to enhance a message.

A visual should be produced in the format which best presents the idea or explanation to the audience. Visuals are used to explain concrete processes (how to prepare a rehydration mixture), as well as abstract ideas (the philosophy behind cooperative efforts). There is ample research to show that using visuals is both an efficient and an effective way to communicate many kinds of ideas.

Acquiring Visual Skills

The ability to understand visuals is an acquired, not an automatic skill. Picture comprehension, pictorial depth perception, and the meaning of the techniques often employed in

printed illustrations must be learned. Visual aids must, therefore, be designed or selected based upon the extent to which the intended audience has been exposed to visual aids and has learned to understand them. It is sometimes assumed that a visual aid serves its purpose if the intended audience can name the items displayed or describe the portrayed condition or activity. This, however, is a simplified approach to judging the value of visual aids. The audience may well be able to describe the visuals and yet not understand the messages they are meant to convey.

Effective communication through visual aids is as complex and difficult to achieve as is communication through language. This is especially true in attempting to produce visual aids to instruct people who have limited experience with them. To achieve good communication through the use of visual aids, the total communication process must be considered. The figure below lists some of the important questions we need to ask about the visuals we use to teach or to communicate. Basic educational goals parallel these questions. This figure clearly illustrates the complex task of communicating through visual aids.

(Continued on page 2)

Evaluation: Past and Present

by **Peter Spain**



Evaluation is at once both overpraised and underestimated. Too often, evaluation has been asked to be something it is not, and not asked often enough to do what it can do best. Recent experience has clarified evaluation's role, especially its specific contribution to achieving project results. My purpose here is to sketch the main aspects of evaluation's traditional role, contrast traditional evaluation with the evolved and evolving role that evaluation is playing today, and then show how evaluation fits into any process for getting things done.

Evaluation Past . . .

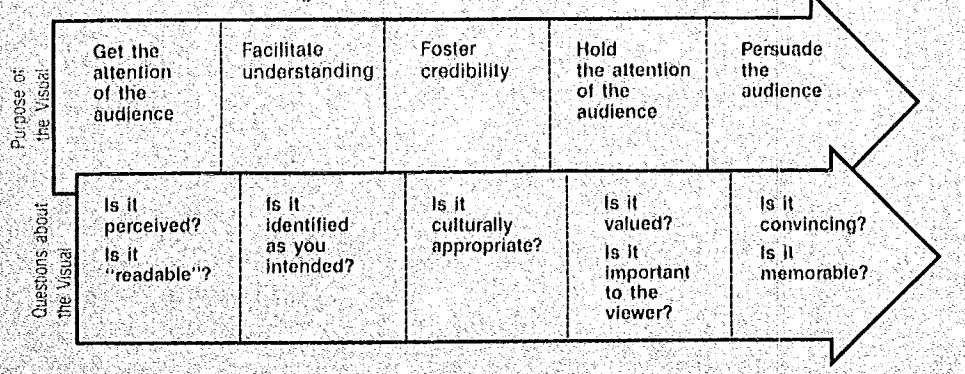
Traditionally, evaluation has been an after-the-fact exercise for those projects that can afford it. Evaluation was viewed as quite an enlightened thing to do, really, a sign of open-mindedness and a willingness to learn. But evaluation was a luxury, possible only in projects underwritten by donors of particular largess. Evaluation was not used to improve current projects but, instead, to plan and improve future ones.

Traditionally, evaluation has been performed by an outside consultant or team. The outsiders contributed not only their particular skills in data gathering and analysis, but also the requisite objectivity much in the manner of basic scientific research. Evaluation carried out in this manner was retrospective—sifting through evidence, questioning participants, drawing inferences, and then rendering a verdict about project success or failure. For the people who ran the project, the matter was out of their hands.

Traditionally, the relationship between project people and evaluators has been adversarial. Project people were often threatened by the possible discrepancy between what *they* thought they should have done and what the *evaluators* thought should have been done on the project. Because evaluators and project people were not necessarily working from the same agenda, the possibility for the development of an adversarial relationship was high.

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Communicating with Visual Aids to Reach Educational Goals





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The first question to ask is, "Is it perceived?" Attention is captured, at least momentarily, when viewers discern there is something new or different to look at in their field of vision. This is especially important when the visuals used to teach are posters or other visual media that must capture the viewers' attention without external verbal prompts from a health worker or teacher. The visual must also be "readable." "Can the audience see and read the pictures and/or words we have displayed?" Readability is affected not only by how we render the display, but also by the distance from the display to the furthest viewer. If people in the last few rows of a classroom cannot read or see your flipchart on crop rotation, then accomplishing your educational goals will be difficult, if not impossible.

Second, "Is the visual identified as intended?" An enlarged photograph of an insect may be understood to be an insect, but the audience may believe their crops are safe since the pests on their crops are much smaller creatures than the insect in the photograph.

Third, "Is the visual culturally appropriate for the intended audience?" In some cultures, depicting a woman smoking a cigarette would not be acceptable and might cause that audience to reject the message. Visuals of people's attire, their living conditions, or even their standing or sitting posture must be acceptable for them to be effective.

Fourth, "Does the visual depict something that is important to and valued by the audi-

ence?" If the visual is meant to instruct the viewer in the painting of a house, and house painting is of no importance to the viewer, there is little chance the visual will hold his/her attention.

Fifth, "Is the visual memorable?" An image that is remembered is one that will be recalled and used. An abstract image of a mother nursing her child may or may not be understood by the intended audience, whereas clearly representative figures are likely to be more memorable.

The objective of this questioning is to determine if the intended audience can identify "read," and understand the visual image. However, the ability to identify what is seen is not enough. The intended audience also must believe what they see, value what they see, and be convinced by what they see. Only then will the real educational goal — to change attitudes and behaviors — be accomplished. Field testing and other research techniques are required procedures for today's visual communicator. The systematic gathering of data about how visuals are perceived, read, identified, valued, or remembered can help advance both the art and the science of communicating with visuals. ■

Ralph Wileman is director of the Educational Media and Instructional Design training program at the University of North Carolina, Chapel Hill, and has worked in many countries, training health workers in designing and producing educational materials.

(Murphy continued from page 4)

participants formed an association to promote the use of visual materials in family planning, training, and education.

Participants from Burkina Faso, Mali, Mauritius, and Togo have integrated sessions in visual communication into their ongoing family planning training programs. With INTRAI assistance, Rwanda has conducted two two-week workshops replicating the training they received in Mali for their own local needs. Although it is too soon to measure the concrete outcomes of the Mauritius workshop, the Philippines' participants have already scheduled an integrated visual and group communication workshop in mid-1986 for the family planning field trainers in their organization.

From INTRAI's experience, it is clear that family planning educators and trainers can develop and use effective visual communication in their training when encouraged to be resourceful and creative in the application of those skills using local resources in their home environment. The inclusion of visual communication skills in the training of health workers contributes toward their self-sufficiency and ability to develop effective health training and education programs. ■

Catherine Murphy has worked as a trainer and instructional developer in international health since 1975. She is currently INTRAI's Training/Materials Officer at the University of North Carolina-Chapel Hill.

**Course on Managing
Health Audiovisual
Materials**

A course that explores the techniques of managing a collection of audiovisuals — selection, evaluation, cataloguing, classification, storage, retrieval, maintenance of materials and equipment — the role that the audiovisual resources person can play within educational or medical institutions, is being offered by The British Life Assurance Trust for Health Education (BLAT) at the request of the World Health Organization. This course is intended for people without formal library training who are responsible for running libraries or resource centers, particularly in developing countries, and librarians wishing to extend their professional skills to help them cope with audiovisual materials. There will be a strong emphasis on practical work. It will be held in London from August 5-21, 1986. The closing date for applications is April 16, 1986.

Further details can be obtained from Ms. B.S. Carney, Information Officer, BLAT Centre for Health and Medical Education, BMA House, Tavistock Sq., London WC1H 9JP. (Telephone: 01-388-7976).

Learning to Use Visual Training Materials

by Mari Clark



There is a long-running debate about whether trainers should be instructed in how to develop and use visual training materials. Discussions about the desirability and practicality of taking time for this type of training often are based on misconceptions that have restricted the use of this potentially powerful communication tool. Time is seldom scheduled to teach visual thinking, designing, and communicating during training of trainer sessions. Trainers rarely use visuals other than flipcharts with lists of key words or objectives in these sessions. If they do use pictures, films, or other visuals for training purposes, they often fail to select and apply them effectively toward specific training objectives. The following points address the lack of appropriate visual communication training and offer suggestions for strengthening visual communication in the training of trainers.

Misconceptions

Many trainers consider visuals for training to be a technical area requiring high-level skills in design, drawing, and audiovisual equipment operation. Because trainers are busy and

need to focus on only the essentials during the brief span of a training course, they often set aside visuals and how to use them as luxuries that are "nice but not necessary." This attitude is influenced by traditional Western formal education where all too often pictures are looked upon as learning materials for small children, and the reading of textbooks with many words and few pictures as the province of adults.

When trainers do use visuals, there is a tendency to focus only on their potential for information transmission—as illustrations for lectures in the form of charts, picture slides, or films—rather than using them to involve the learners actively in the training session. Related to this is the frequent lack of attention paid to effective use of visuals in terms of timing, cultural appropriateness, and smoothness in presentation. Often there is too much dependence placed upon a polished visual presentation to convey a message. Experience shows that even the best designed visual is only a distraction when shown at the wrong time, to the wrong people, or handled in the wrong way. The common theme connecting these misconceptions is that visuals are seen as separate products rather than an integrated part of the training process.

Learning by Doing

Avoidance of visuals based on these or other misconceptions is unfortunate because their use, combined with participatory training techniques and effective verbal communication, is a powerful means of conveying abstract ideas in a visual context, and adds a concrete element to the planning process. It is important to keep in mind that effective use of visuals in training is as important as their design in influencing learning and behavior change. Research and practical experience indicate that they are most effective when combined with nonformal education techniques that enable questioning and problem solving as well as transmission of information. Visual aids, when combined with these techniques, not only transfer information; they can stimulate discussion, provide a focus for problem identification and problem solving, and involve people actively in the learning process within small group and individual activities.

Working with learners to develop visual aids is an effective means of learning by doing. In the process of developing visuals, trainees broaden and reinforce their learning about the ideas or messages represented. It also

(Continued on page 4)

Visual Communication Training for Family Planning Workers

by Catherine Murphy

Is it possible to turn a non-artist health worker into a producer, user, and trainer of visual communication techniques for health teaching? Based on the results of numerous visual communication workshops conducted by the Program for International Training in Health (INTRAH), the answer is an emphatic "yes."

With funding from the Agency for International Development, the INTRAH Program has developed various family planning training workshops for selected African, Near Eastern, and Asian countries. One of the identified needs among some of the host countries was for family planning workers to acquire skills to develop their own visual materials and then to use them in family planning education or training of other health workers. A two-week visual communication workshop was designed to address this need, and such workshops have now been conducted in Kenya, Somalia, Sierra Leone, Mali, Tunisia, and Rwanda.

During these family planning visual communication workshops, the first step is to explore the rationale for using visual communication methods for various general health training or

educational problems. Participants then proceed through a ten-step process for planning, producing, and using visual communication materials and methods. The first step in this process examines the six teaching questions which serve as the foundation for visual communication. These questions are:

1. WHOM am I teaching?
2. WHAT do I want them to be able to do?
3. WHERE and HOW LONG will the instruction take place?
4. What teaching METHOD or METHODS will I use?
5. What VISUAL AIDS will I use?
6. How will I know how EFFECTIVE the instruction was?

The process then outlines visual thinking skills, and design considerations that form the basis for visual message design. These skills enable participants to judge what makes a good visual and to sketch visuals which illustrate concepts, data, and processes. The workshops focus on developing practical skills. Participants decide what topics will be discussed depending upon their own needs or interests.

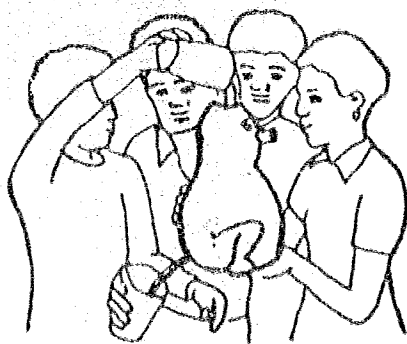
They work in small groups and individually on visual communication problems with guidance from trainers on designing, pretesting, and producing visual materials then demonstrating how they will be used for teaching other family planning trainers.

An important element of these workshops is the emphasis placed on making training relevant to local resources and needs. This is accomplished by creating models and picture series and other visuals from locally available raw materials, facilities, and human and material resources. Emphasis is also placed on developing materials on topics that the participants have identified as needed by their target audiences. Finally, INTRAH works with national co-trainers to design, conduct, and modify the training process itself. Once the national co-trainers develop basic skills in visual communication training, they begin contributing their own ideas for techniques and materials that are locally and culturally relevant. Through practice and technical assistance these national trainers learn how to conduct visual communication training on their own.

(Continued on page 4)

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strengthens the communication skills of the learners. An understanding of how to pretest visuals is also important to assess the materials and to learn about the interests of the audience for whom the training is intended. The following visuals illustrate some of these applications.



Making visual aids is very useful in helping learners discover solutions to problems. Mothers and children can learn about diarrhea and dehydration by making their own "baby" from clay, tin cans, plastic bottles, or gourds. They can experiment with the principle of rehydration by pouring water into the "baby" and mending the different openings with "food."



You could use this picture as the basis for a discussion by asking, "What do you think this picture is about?" Often this is the only question you will need to ask. To keep the discussion going, you might ask, "Who are these people?" "What is happening in the picture?" or "How do the people feel about it?"

Selection of Visuals

Specific needs of trainers vary considerably in the selection, design, and use of visuals depending on the tasks and resources of the trainers. For some, the selection and use of visuals are the primary needs. Given a primary training situation, they need to decide what, if any, visuals will help them accomplish their goals and how to use those visuals most effectively with particular training techniques. For others who work with artists, basic skills in visuals design help them communicate more effectively and avoid miscommunication that wastes hours of planning and drawing time. Those who have no artist and few resources also need skills in visual design to develop their own visuals or to use simple techniques to adapt existing materials for their specific

training needs. In all these instances, how to make visuals is not nearly as important as how to select, design, and use visuals and to effectively integrate visuals with participatory training techniques.

Below are some suggestions for strengthening visual communication in the training of trainers:

1. Use good examples of visual models throughout the training.
2. Display examples of good visuals related to the topics so trainees can handle them.
3. Give trainees opportunities to practice selecting and using visuals effectively with a variety of training techniques.
4. Provide opportunities for trainer and trainee feedback on selection and use of visuals with training techniques.
5. Use visuals to explore the basics of effective visual communication and what hinders communication. (See the bibliography at the end of this article.)

For trainees who need to work with artists or must develop their own visuals:

1. Provide practice exercises in communicating visually.
2. Demonstrate and practice planning visual training materials based on training objectives.
3. Demonstrate and practice pretesting materials, emphasizing this as a means to learn about the audience as well as the effectiveness of the materials.
4. Demonstrate and practice simple techniques for adapting and making visuals by tracing parts of existing materials. ■

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Mari Clark is currently finishing her doctoral dissertation in anthropology. She was formerly associated with CPPI International, Chicago where she directed the development of the Peace Corps training manual for the Control of Childhood Communicable Diseases Project.

(Murphy continued from page 3)

Multi-Country Training

INTRAH has further expanded the use of visual communication in health training by conducting multi-country family planning visual communication workshops. Two of these have been conducted in Africa: one in Mali in July 1984 for participants from nine French-speaking countries, and one in Mauritius in August 1985 with ten English-speaking countries participating. The participants in the international workshops were national-level trainers of family planning workers or national-level family planning educators of the general population in their countries. They learned the same skills in how to design, adapt, pretest, produce, and use visual communication methods as the participants at the in-country workshops.

However, national level trainers' and educators' job responsibilities include training of other trainers and workers as well. Therefore, they developed action plans during the workshops which integrate visual communication skills training into existing family planning training through curriculum changes and workshops on developing visual materials. In order to develop these action plans, a third week was added to the workshop. During this week, participants identified curriculum areas in their own family planning training programs which could be strengthened by the introduction of visual communication skills. They developed workshop plans and practiced conducting sessions on visual communication topics.

These international workshops provided the participants with opportunities not possible with in-country workshops. There was considerable cross-cultural and informational exchange among the countries represented in the workshops. Time was set aside daily for participants to share and discuss family planning educational materials developed and used in their own countries. A session on traditional talking and singing techniques explored the use of visuals with traditional storytelling, parables, and songs used for educational purposes.

Outcomes of International Training

The most obvious workshop outcomes were the visual materials and techniques that the participants carried back to their work sites to use and share with others. Other results were the participants' workshop plans and individual action plans that spell out strategies for developing and using visual materials and teaching others these skills as well. In Mali, the

(Continued on page 2.)

TUNING

IN



From Nicaragua to Thailand: Adaptating Interactive Radio Instruction

by Jamesine Friend, Klaus Galda, and Barbara Searle

Many developing nations are unable to provide adequate instruction in their primary school classrooms because they lack economic and human resources, especially in remote rural areas. One of the quickest and most reliable ways to alleviate this problem is to provide *interactive radio instruction*, a proven technology for use in poorly equipped schools with undertrained and overworked teachers.

The technology of interactive radio instruction, although quite new, has already proved itself to be very effective in improving the quality of instruction in diverse subjects and countries. It has been used to teach mathematics in Nicaragua, English as a second language in Kenya, and reading in the Dominican Republic (see *DCR #49*). Extensive evaluation of these programs shows significant improvements in children's achievement scores. In Nicaragua, for instance, an evaluation of a first grade class showed that average mathematics test scores increased from 39 percent to 65 percent.

Implementation costs, when used with large numbers of students, is very low—less than one dollar per year per student. Unfortunately, many nations who would like to use interactive radio instruction and who can afford the implementation cost of the lessons, do not have funds available for developing completely new lessons, and would also like to implement it at more than one grade level per year. Development costs to produce a high-quality, year-long series runs between \$300,000 and \$500,000, due largely to the careful planning and the extensive field testing required to produce such lessons.

A possible solution to this dilemma is to adapt interactive radio lessons that have already been prepared for another country rather than developing a completely new series. The questions are whether existing lessons can be adapted for another country's needs, and whether such an adaptation would change the materials so much that the quality of the original product would be significantly reduced.

Adaptation Process

The opportunity to investigate these questions arose in 1980, when Thailand decided to adapt the Radio Mathematics lessons from Nicaragua, and use them on a small scale to determine if they would be appropriate for a Thai audience. In Thailand there is a major disparity in the quality of education between urban and rural schools, and it was hoped that the use of radio instruction, which would be uniform throughout the country, could help to reduce this difference.

Although radio instruction has been used with considerable success in Thailand for many years, there were no courses in mathematics for elementary school comparable to

the course designed for Nicaragua. At that time, adaptation of such materials had never been done in Thailand, so it was decided to adapt only the second grade, and to pilot test the lessons rigorously in a small number of schools before planning nationwide usage.

Because all the original scripts were written in Spanish, the first and major adaptation was to translate the lessons into Thai—a considerable task due to the dissimilarity of the two languages. Adaptations also were needed in the songs, games, and jokes that are an integral part of the lessons, and required comprehensive rewriting to reflect Thai culture. Geographic references, names of common fruits, and other culturally related components of the scripts were also changed.

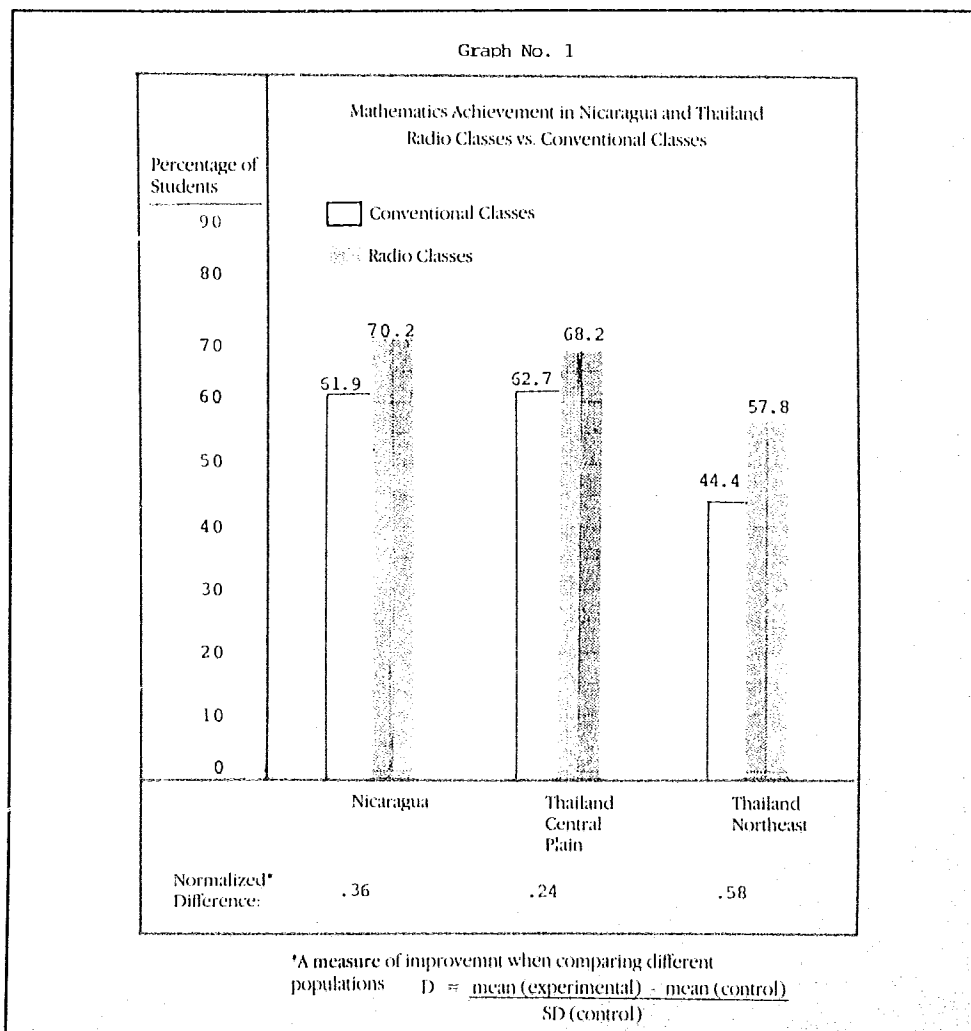
Fewer content changes were required; for example, instruction in division was added to the lesson plans. For the most part, however, Thai mathematics curriculum for early grades was quite similar to the Nicaraguan mathemat-

ics curriculum. Adapting to the standard educational radio series already in place in Thailand which lasts 32 weeks, the total number of lessons was reduced from 175 to 160, calling for some lesson incorporation and deletions.

Lessons Begin

Broadcasting began in May 1980, the beginning of the Thai school year. The pilot study was located in two areas of the country, the Central Plain region near Bangkok, and the Northeast, a very isolated, poor region of the country. Lessons were broadcast daily to second grade children in 16 schools in each region. At the end of the school year the children were given a special posttest to assess their abilities in mathematics. At the same time, children in 32 non-radio classes, similarly divided between the two regions, were given the same test to establish comparative data to that of the children in radio classrooms.

(Continued on page 11)



A Communicator's Checklist

1 The Promise of Literacy, by H.S. Bhola, et al. (Baden-Baden, West Germany: NOMOS Publishers, 1983) 283 pp.

The Promise of Literacy reports the proceedings of the 1982 International Seminar on Literacy held in Udaipur, India. H.S. Bhola, of Indiana University, and Josef Muller and Piet Dijkstra, both of the German Foundation for International Development, were coauthors of the report. The seminar itself was one of a number of international conferences which have been convened over the last two decades to discuss adult literacy training. In fact, to read *The Promise of Literacy* by itself is like reading a passage out of context.

The Udaipur Seminar focused specifically on the "mass campaign" strategy for adult literacy training. The rationale for this focus is explained in the introduction as follows: "In most parts of the Third World, barring a few happy exceptions, literacy work has been in the form of experimental projects and cautious pilot programs. Strategies used have seldom been bold or commensurate with the size of the problem." One such bolder measure is the mass campaign which has proven to be a promising strategy. As the Udaipur Declaration maintains, "The clear lessons from efforts in many countries is that nationally motivated mass campaigns can banish illiteracy regardless of the adversity of conditions a country faces."

Convinced of the efficacy of the mass literacy campaign, the organizers of the Udaipur Seminar attempted to provide a forum for government planners and literacy experts and practitioners already experienced in conducting mass campaigns to compare and contrast strategies with each other and to share what they had learned with representatives of countries presently in the process of planning and implementing campaigns. To provide a common point of reference for the discussions, the organizers structured the seminar around a Unesco-commissioned study by H.S. Bhola, *Campaigning for Literacy*, in which eight different historically significant campaigns form the basis for a comparative study of the campaign strategy. Bhola included in his study a well-written theoretical overview of how to plan campaigns in a chapter entitled "Planning, Implementing, and Evaluating Literacy Campaigns: A Memorandum to Decision Makers." The seminar participants found this "Memorandum" to be "a useful and systematic elaboration of planning, implementation, and evaluation of literacy campaigns, programs, and projects." Consequently, it appears again in its entirety in chapter six of *The Promise of Literacy*.

One of the important contributions of conferences such as the one in Udaipur is that resulting publications like *Campaigning for Literacy*, *The Promise of Literacy*, and the more

recent *One Billion Illiterates* together provide a historical overview of many of the mass campaigns undertaken around the world. Unfortunately, some of the campaign reports from the Udaipur Seminar in particular are overly brief or too shrouded in official government rhetoric to be informative.

The "Udaipur Literacy Declaration," a significant document which summarizes the conclusions reached at this Seminar, is also included. One of the noteworthy conclusions is that, although most successful campaigns are characteristic of "societies in the midst of profound and structural changes," any society, regardless of the political system, "can activate forces for change and create a supportive political environment." The introduction to the book echoes this conclusion when it claims that the necessary, and indeed, a sufficient condition for mounting a successful mass literacy campaign is "the existence of the national will to mobilize national imagination and national resources." Such claims stem from the comparative evidence that, although most of the successful literacy campaigns have occurred in the context of revolutionary movements, some countries, most notably Brazil, have managed to conduct campaigns in non-revolutionary environments, as well as from evidence from countries like Nicaragua that campaigns do not depend so much on big budgets as on a national popular will to eradicate illiteracy.

In general, this book contains an informative section on the theory and practice of conducting mass literacy campaigns, and an important declaration which once again calls for literacy to be placed as a priority on the international development agenda. To be understood in context, however, *The Promise of Literacy* should be read as part of the informal series of publications which have emerged as the working papers or reports of other international adult education and literacy conferences. ■

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Carron G. and Bordia A., editors, *Issues in Planning and Implementing National Literacy Programmes*, Paris: Unesco, 1985.

Fordham P., editor, *One Billion Illiterates: One Billion Reasons for Action*, Toronto: ICAE and Bonn: DSE, 1985.

World Conference of Ministers of Education on the Eradication of Illiteracy: Final Report, Paris: Unesco, 1965.

Cecil Klassen is currently completing his Master's degree in International and Comparative

Adult Education at the University of Toronto, and has taught English as a Second Language to high school and adult students.

Available from: NOMOS Publishers, P.O. Box 610, D-7570, Baden-Baden, West Germany for 38 German Marks approximately US\$16. Free for developing country readers from: German Foundation for International Development, Hans-Böckler-Str. 5, D-5300, Bonn 3, West Germany.

2 Scientific Research and Social Goals: Towards a New Development Model, Federico Mayor, ed. (Oxford: Pergamon Press, 1982)

236 pp.

This collection of essays focuses on the relationship of social priorities and scientific research as a new basis for national and international development. The goal of this lofty endeavor is to redefine development in human terms, to replace the emphasis on material goods of the industrialized nations, with the human needs and limited resources of the developing world. Technology and the products of scientific investigation, it is argued, should be redirected to the concerns of world poverty, technology transfer, and the effective use of available knowledge; and only through the reorganization of international priorities and the redirection of scientific efforts will such goals be reached.

The volume is the result of the "Research and Human Needs" program that was conceived at a symposium/workshop in Venice in December 1975. The book "discusses the results so far achieved, and what they imply for the future."

The individual presentations represent a number of disciplines, countries, and styles, divided into three sections: concepts and philosophy, methodological approaches, and practical programs in different parts of the world. The essays are written as speeches and retain a sense of purpose and polemic which suggest the political and policy orientation of the book; yet, this dialogue with the unseen governments, policy-makers, and interested public is illustrative of the lack of coherent editing or logical progression of ideas. In this sense, the book will be of interest to individuals looking for an introduction to the idea of socially appropriate development, but will not provide a satisfactory exploration of the subject for those deeply involved in the field. The humanistic/scientific dilemma is well known in most development agencies and university settings such that the real importance and impact of these essays will be on the general public and political domains. The editor has included a number of essays by individuals who

are no normally considered authorities on development, such as the actress Bibi Andersson, but who add a new dimension to the discussion by the inclusion of the arts and humanities in the overall human needs framework.

A possible criticism of the volume is the unqualified assumption that science is good, or on the other hand, that "good science" cannot have a specific applied objective without striking "a mortal blow." It is unclear what the ultimate "good" of science will be and what contribution scientific endeavor will make to the problems of the developing world. Nonetheless, the idea that the power of science—both in the metaphorical and technological—should be linked to social priorities is a significant statement and organizing principle for research institutes, programs, and international funding. The argument that knowledge, science, and intellectual skills should be placed in the service of people is a moral imperative; this book begins a discussion of how such an imperative can overcome the problems of national boundaries, cultural values, and economic constraints.

One of the most successful papers is by K. Soedjatmoko, Rector of the UN University, who reviews the national policy implications of the basic needs model. By examining each sector of a developing economy, including health, housing, education, food, land reform, and cultural, legal, political, and ideological policies, he evaluates the problems and questions which will arise with the application of the basic needs model. He concludes by reminding us that "the massive intellectual effort and the staying power which a continuing dialogue requires can only be generated and maintained when . . . mutual trust . . . mutual faith in the basic qualities of the other people . . . and a willingness to suspend final judgement for a long period of time" are a part of the common commitment that has been made. This level of commitment that has been made. This level of commitment and the importance of human relationships still remains the basic medium for development and successful social change. ■

Setha Low is Associate Professor of Landscape Architecture and Regional Planning, City and Regional Planning, and Anthropology at the University of Pennsylvania, Philadelphia, Pennsylvania. She currently is involved in culturally appropriate planning and design in Costa Rica and the United States.

Available for US\$39.00 from Pergamon Press, Inc., Maxwell House, Fairview Park, Elmsford, New York, 10523, U.S.A., Attn.: Book Order Department.

3 **Technology Policy and Development: A Third World Perspective**, Pradip K. Ghosh, ed. (Westport, Connecticut, Greenwood Press, 1984) 593 pp.

Developing country technology policy has been most noted for its absence, so a collection of recent essays from developing countries on the subject sounds intriguing. Unfortunately,

nately, *Technology Policy and Development: A Third World Perspective* is not that book. This collection includes a mix of articles by industrialized country authors, many written in the early 1970s, and a few reprints of articles and publications from the U.N. Conference on Technology and Development and the U.N. Industrial Development Organization. A statistical section includes some very general U.N. economic data for the 1970s, developing country research and development expenditures and the number of engineers and scientists in the early 1970s, and developing country expenses for technology transfer in the 1960s. An annotated list of pertinent books, articles, and institutions occupies almost a third of the book. Too many of the articles are hopelessly out of date. Attitudes and understanding of what is appropriate technology have evolved considerably since 1973 when Robin Clarke published the essay reprinted here. William Eiler's 1980 article uncritically quotes a prediction that photovoltaic cells will cost 50 cents per peak watt in developing countries in 1986. The article on science and technology in black Africa was first published in 1973. An article on industrial and technology policy in Tanzania describes policies in detail, but provides no insight on whether these policies are to blame for the country's current problems. Several of the articles are still relevant, if not timely. Charles Weiss and his colleagues at the World Bank offer good generic advice in "Guiding Technological Change." The forbidding sounding "Technological Self-Reliance of the Developing Countries: Toward Operational Strategies," by the U.N. Industrial Development Organization is a comprehensive statement of developing country attitudes toward international patent policy, transnational corporations, and the industrialized countries, and of technology policy options open to the developing world. Denis Goulet provides an insightful commentary on the role of values in technology policy, and the UNCTAD review of developing country technical progress from 1950 to 1975 includes useful historical data.

Technology Policy and Development is most successful as a bibliographical reference. The 190-page annotated bibliography of books, articles, and other bibliographies is a handy guide to pre-1982 literature. The statistical section is a useful lesson in how little is known about science and technology activities in the developing countries. The essays provide a historical portrait of what the U.N. and Western development specialists were thinking about technology and development in the 1970s, but the book does not deliver what its title promises—developing country thoughts and actions on technology policy. ■

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Available for US\$49.95 from Greenwood Press, 88 Post Road West, Box 5007, Westport, Connecticut 06881, U.S.A.

On File at ERIC

Documents recently entered in the ERIC (Educational Resources Information Center) files include an overview of communication and technology in development, a report on a theater-for-development workshop, a handbook for film producers, and a study and manuals on the use of audiovisual materials.

All these documents are available in microfiche, and all but one in paper copy, from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22304, U.S.A. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping costs may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.

• *Beyond the Flipchart. Three Decades of Development Communication*. 1985, 45pp. (ED 259 710).

For more than a decade, the Academy for Educational Development's Clearinghouse on Development Communication has collected information and chronicled trends in the application of communications technology to development. This paper summarizes what the Academy has learned about communication and development from various perspectives and discusses the future use of new technologies. Areas covered include: (a) strategies (media based, instructional design, participation, and marketing); (b) the importance of language, culture, and politics; (c) the development sector (agriculture, family planning, education, health, nutrition); (d) technology (television, radio, print media, traditional and folk media, other media, telecommunications, computers); and (e) lessons for the future (audience orientation, targeting areas for change, media networks). Examples of successful communications projects are included to illustrate the positive impact of media intervention on education and training. Available from the Clearinghouse on Development Communication, 1255 Twenty-third Street, NW, Washington, DC 20037, or from EDRS in microfiche only for 75 cents.

• Kidd, Ross. *From People's Theatre for Revolution to Popular Theatre for Reconstruction: Diary of a Zimbabwean Workshop*. CESO Verhandeling No. 33. 1984. 95pp. (ED 259 694).

Focusing on the experience of one of seven working groups at a theater-for-development (TFD) workshop in Zimbabwe, this report details the process followed by many groups, and reveals some of the major learnings, dilemmas, contradictions, strengths, and limiting factors found in a practical village-based TFD process. This drama form is described as an experimental collaborative process designed to take theater out of urban enclaves and make it accessible to the masses, presenting such

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Traditionally, evaluation has sought to answer the questions "What is wrong?" "What is the problem?" and – inevitably – "Who is to blame?" At the conclusion of a project when people's work was evaluated, there was little they could say to counter a negative evaluation. Since the project was already over, they could not make the indicated adjustments, and since involvement in future projects could be jeopardized by a negative evaluation, the evaluation exercise represented, for these people, a substantial personal threat.

Traditionally, evaluation has often been confused with policy analysis. The evaluator has been looked upon as someone who tells people what they should do or what they should have done. There is, however, a very important distinction between these two functions. Policy analysis properly combines the wisdom, experience, and judgment of a group of people to determine what to do (policy), and to determine later if what has been done should have been done. The evaluator's role is more narrow: the evaluator determines what has been done, so actual results can be compared with the desired results.

The characteristics elaborated above have long been assumed to be standard characteristics of the evaluation process. I wish to challenge these assumptions, to show how evaluation can play a more useful role in project implementation. Indeed, many evaluation practitioners have gradually moved toward more constructive uses of evaluation, precisely because they have gone beyond assumptions.

Evaluation Present. . .

Evaluation occurs throughout the project. The traditional assumption that evaluation occurs after-the-fact implies that evaluation cannot contribute to the outcome of the project, but only to a cumulative body of "lessons learned" that persons undertaking new projects might consult and follow. The most critical and limiting corollary of the traditional assumption – that evaluation was to be done after the project – was that project people somehow could not state the results they wanted beforehand, or measure where they stood in terms of those results until it was too late to do anything to change what had happened. It was assumed project people could not control what was happening once the project had started. More recently, however, evaluation has been recognized as a valuable tool to help project people achieve their goals.

Evaluation can, in fact, be carried out at any stage of the project – before, during, and after – as a way of measuring the actual situation vis-a-vis the project's desired results. Thus, *what is required for a good evaluation* – before getting out statistics books, plugging in a computer, or designing a specific data-gathering method – *is a clear statement by the project people of the desired results, in measurable terms.* Defining measurable indicators of desired results defines and clarifies the evaluator's task. It also requires that project people understand what is happening *before* the project (baseline evaluation), and *during* the project (formative evaluation) in terms of

those same, precise, measurable indicators. The baseline evaluation will aid greatly in project design, and the formative evaluation will allow the project team to change things while there is still time to affect project outcomes.

From this perspective, evaluation is integrated into the project as a way to get things done. Always using the desired results of the project as the criteria, evaluators can look at what is happening before and during the project to guide project design and implementation.

Evaluation is an essential function, not

a luxury. When evaluation is done after the project, results are used not by the project people whose work is being evaluated, but often by a nebulous group of future implementors in similar settings. Theoretically, they would take the evaluation results, find the similarities between the evaluated project and the contemplated project, apply useful lessons, and then move onward and upward on the basis of this continually cumulating body of lessons learned. In reality, future implementors take too little time to study the state of their art, and often say that few lessons are directly applicable anyway. When these future implementors are the only beneficiaries of evaluation, the sponsors of the project to be evaluated may hesitate to pay for something which is not of direct use to them.

Thus, evaluation appeared to be a luxury, something peripheral to the project itself, and something whose value for other projects was hard to determine. But when evaluation becomes part of the fabric of project implementation, as a stimulus to the achievement of clearly stated results and as a monitor of measurable indicators of those results, the project itself becomes the chief beneficiary of evaluation. No longer a luxury, evaluation is seen as essential for getting things done.

Once the sponsors are convinced that evaluation is vital to accomplishing the desired results, they can justify this investment on solid grounds – the alternative being to gamble that the project is and will continue to achieve those desired results.

Evaluation should be done by insiders.

To the degree that an evaluation is complex, the project team needs to include persons with the requisite technical skills who bring with them a blend of social science, statistics, and computer analysis. They should be brought in to work for the project's desired results and remain with the project from start to finish. Traditionally, evaluators have been outsiders – people not concerned with the project's desired results, who came on the scene at the end of the project. Also, grounds for using outside evaluators went further, that is, to maintain objectivity and to maintain the standards of scientific experimentation. Perhaps objectivity is important if you look at evaluation only as a post-mortem assessment of what happened. Objectivity implies a definite distance on the part of the evaluator. To the extent that accurate, timely information about results can contribute to the project, however, evaluation should not be objective, but rather be used to get those results.

Similarly, maintaining standards of scientific experimentation poses a problem when applied rigorously to evaluation. If evaluation stays above the battle, not offering its findings to the project team because of a desire to be "scientific," neither science nor the project benefits. A project is not an experiment – intervening simply to see what happens. A project has desired results and needs to evaluate interventions regularly in terms of those desired results. While an experiment is value-free, a project is not. Achieving the desired results of the project is the ultimate goal, and the evaluation process is used to determine whether progress is being made toward that end.

Evaluation is not adversarial.

Evaluation has often been a threat to many project participants, and justly so. When used only retrospectively and when not arising from a predetermined project agenda, evaluation can easily become a negative and damaging experience for a person. Even the best people can design and implement a project that does not achieve – without mid-course corrections – what they had hoped for. When used only retrospectively, evaluation offers no constructive guidelines to the project; and, if the evaluation is negative – implicitly or explicitly – the blame falls on those associated with the project. A retrospective evaluation deals only with success and failure, with praise and blame, and is rightly perceived as a threat.

In contrast, when evaluation is integrated into the project, both at the baseline and during the formative stages, the focus shifts from success and failure – praise and blame, to *improvement*. More importantly, focus shifts from the evaluation of persons to the evaluation of methods. When an evaluation is carried out during a project, and when this information is made available to those who are committed to achieving its desired results, it is possible to change methods in mid-course.

Evaluation clearly becomes a scrutiny of methods in terms of improving desired results and not a personal ordeal in terms of success or failure. This depersonalization of evaluation is not incidental. It stems directly from the project's articulation of its desired results at the beginning, and from ongoing assessment while the project can still be improved. In the absence of desired results, people will work off their own, separate agendas and be vulnerable to criticism from people with other agendas. The work becomes personalized. With everyone focused on the same agenda, however, the project team need not question themselves when improvement is needed. It is the methods, not the people, that need changing.

Evaluation differs from policy analysis.

In the absence of good policy analysis, evaluators are often brought in to determine what should be done. It is commonly believed that evaluators can and should tell people what to do, testifying to a lack of good policy analysis. Policy analysis should determine the desired results for an enterprise, as well as the measurable indicators of those desired results.

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Participatory Radio in Arequipa

by Jane Duran



In the city of Arequipa, located in the mountains of southern Peru, a participatory radio project is attempting to motivate young people to become more involved in their communities' self-help activities. This project is supported by the British Council's Educational Projects Fund, and its focus is the production of a weekly magazine-format radio program called *Inquietudes*, or "concerns, feelings that motivate." *Inquietudes* is broadcast by the local religious and cultural radio station *Radio San Martín* and is aimed at young people between the ages of 16 and 23. With this three-year project, running from 1983 to 1986, the British Council provides a studio and on-site recording equipment and materials, training programs and resources, and a London-based project consultant, and local support from the British Council office in Lima.

The catalyst for the project is a small group of volunteers working for a production center called COAMCOS (*la Comisión Arquidiocesana de Medios de Comunicación Social de Arequipa*). Since 1975 COAMCOS has been producing an average of ten weekly cultural and religious radio programs broadcast locally on behalf of the Archdiocese, but prior to the *Inquietudes* program, the production team had had no experience in community based, participatory radio. Funding and time constraints argued in favor of selecting a priority target audience and limiting output to a 24-minute weekly program. After considerable audience research, the team decided to focus on young people in the *pueblos jóvenes*, or "young villages" of Arequipa in the hope that this sector can be motivated to play a more active role in the community.

Pueblos Jóvenes

The *pueblos jóvenes* surrounding Arequipa number well over three hundred, and house a majority of the population of the province of Arequipa. They are populated mainly by migrants from other regions of Peru, and are in varying stages of development depending on factors such as the length of time established, proximity to the city, the degree to which communities have organized themselves, and support from local organizations. For many villages, however, economic and social problems are acute. Many lack essential services: running water, electricity, sewage and rubbish disposal, and adequate health facilities and schools, while unemployment is widespread. Few formal communication networks exist between the *pueblos jóvenes* to facilitate an exchange of information on community development activities, and enable communities to learn from each others' experiences. One of the purposes of the COAMCOS project is to provide a forum in which listeners can talk to each other about local problems and how they might work to solve them, while drawing on the experience of communities which have organized self-help projects.

An essential underpinning to the project is its link with a local grass roots organization called CIRCA (*la Federación de Círculos Sociales Católicos de Arequipa*). CIRCA is a religious institution with branches in 43 *pueblos jóvenes* where it has established clubs and centers that support community development activities. A CIRCA coordinator works closely with the COAMCOS team in all phases of *Inquietudes* program development. CIRCA also helped the team to carry out their audience research activities, and is an invaluable source of contacts needed to engage community participation in program production and evaluation.

Training

The COAMCOS team has received training at several stages of the project to build on their previous experience and skills in order to meet the special demands of a participatory radio project. Training emphasized audience research techniques; on-location recording skills; program formats involving listener participation; training skills to enable the team to train community groups to produce their own materials; and evaluation techniques for gathering listener feedback. The team members also needed to learn about other developments in the field of participatory and educational radio so as to operate in a wider context and draw on these experiences as sources of ideas.

Two team members attended a course for educational radio trainers at the *Centro de Teleeducación, Pontificia Universidad Católica del Perú*, who then gave other COAMCOS members and CIRCA representatives basic training in research, production, and evaluation skills. These same team members also visited an established community radio project in Puno, Peru, *Radio Onda Azul* (see DCR #48) where they were able to observe listener participation in action. This exposure to the potential of participatory radio subsequently influenced the final shape of the COAMCOS project.

As a result of their training, the team was able to develop an effective audience research strategy. Group discussions and surveys provided the team with socioeconomic information on the *pueblos jóvenes* and identified young people as a priority group heretofore marginally involved in community development activities. Further target group research revealed that there was a strong interest among the respondents to participate in program production.

The project also provided two intensive on-site training workshops run by a BBC specialist. The first, in January-February 1984, provided further basic production training for team members and CIRCA representatives. Using the audience research gathered earlier, program format, content, and style for *Inquietudes* were developed at this time. The magazine format was selected as the best way to present in-

formation and ideas on a wide range of topics and issues relevant to young people from the *pueblos jóvenes*. This format, with its organization into discrete sections, also accommodated the time constraints of the team, who could work only at night and on weekends. It enabled the team members to work independently when time permitted, although planning and final compilation would be a team effort.

A second on-site training workshop occurred a year later. During this workshop, the BBC specialist and the team reassessed *Inquietudes* based on an interim evaluation survey carried out by the team in the *pueblos jóvenes*. The training concentrated on those production and training skills which needed to be strengthened in view of ways in which the project had developed. Changes on program strategy and content were also made at this time.

Program Evolution

Since March 1984, *Inquietudes* has offered young people a forum where they can discuss issues that concern them. Community news and announcements are increasingly presented by members of the communities themselves; some presentations are produced entirely by groups of young people from the villages who were trained by the COAMCOS team. The program features local musicians and presents ideas for new activities in which young people can participate, while providing a channel for information on community projects. While maintaining the magazine format, *Inquietudes* may take the form of a "special" devoted to an individual village, recorded on location, and emphasizing problems and self-help projects to improve conditions. Content is lively and varied, increasingly carrying the voices of young people from the *pueblos jóvenes* rather than those of the COAMCOS team members which had initially dominated the programs.

Evaluation

Evaluation is an integral part of this project. Listeners' comments and suggestions are broadcast on *Inquietudes* and program changes also reflect survey information gathered by the team. Another form of evaluation occurs with regular contact between the field team, the London-based Media Group, and BBC specialists. Copies of all transmitted tapes are sent to London together with "letter cassettes" in which the COAMCOS team discusses new developments and problems, allowing for regular project monitoring and rapid response time.

Since the first broadcasts of *Inquietudes*, the team has concentrated on increasing the involvement of their listeners in the various production stages of the program. This effort has been successful as the young people from many of the communities regularly participate in production activities. Seen in a wider context, the COAMCOS project is only one of a variety of existing activities in Peru in the field of participatory radio. Some of these rely on the most rudimentary facilities, such as public address systems in market places or villages to disseminate community programs. Other radio activities are implemented by local groups

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who acquire time on commercial stations for individual programs; while a few radio stations sponsored by religious organizations broadcast a wide range of listener-based programming.

Although participatory radio in Peru is still overshadowed by traditional commercial radio programming, there is now some awareness of its potential impact and use as some communities are given access to a communication channel which can help them to achieve their self-development goals.

Jane Duran is a Media Officer with the British Council's Media Group, and advises on training and resources for radio and its applications for education and development.

Addendum

Dr. Norbert Hirschhorn, who contributed the article "Saving Children's Lives: A Communication Campaign in Egypt," in *DCR* #51 is Vice President of the John Snow Health Group, Boston, Massachusetts.

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common concerns as crop production, water shortages, immunization, literacy, and family planning. A day-by-day diary account of this working group provides an overview of, and describes the specific tasks involved with, the production of a "theater *pungue*"—people's theater. A TFD model lists educational objectives for the drama process and defines the objectives of the workshop: (a) to train development cadres and theater artists in TFD, and (b) to start a TFD program in the Murewa area of Zimbabwe as a training and popular education/culture program. The report concludes with an analysis of the workshop, including constraints, relationship with villagers, organizational strategy, and teamwork. An extensive bibliography is included. Available from the Center for the Study of Education in Developing Countries, Badhuisweg 251, P.O. Box 90734, 2509 LS, The Hague, The Netherlands, or from EDRS in microfiche for 75 cents or paper copy for \$7.20.

• *Communicating with Pictures. P-8A.* 1976. 28pp. (ED 257 437).

In early 1976, the National Development Service of Nepal and UNICEF conducted a study designed to determine whether it would be possible to communicate ideas and information to Nepalese villagers who could not read by using pictures only, the kinds of pictures that would be most meaningful for villagers, and whether different colors had special meanings for them. Teams of data collectors went to nine different parts of Nepal and conducted interviews with more than 400 adult villagers from various groups; none of the villagers interviewed had ever been to school. The researchers showed the villagers a variety of pictures and colors and noted their responses. The main findings of the study indicate that villagers tend to "read" pictures very literally and do not expect to receive ideas from them; villagers do not necessarily look at pictures

from left to right, or assume that there is any connection between pictures in a series; pictures that try to convey ideas or instructions often use symbols that are not understood by villagers; villagers are interested in and attracted by pictures, even though they may need help to interpret them; realistic pictures with a minimum of background detail are the easiest for them to understand; and pictures showing a lot of different objects are not well understood. Available from EDRS in microfiche for 75 cents or in paper copy for \$3.60.

• *Working with Villagers. Media Resource Book: Skill Exercises, Line Drawings, Recipes for Making Teaching Tools and Materials. Activities, Media Skills, and Sample Lessons for Training Fieldworkers in Home Economics and Family Planning.* 1977. 103pp. (ED 258 567).

Designed for use in conducting media production training with Peace Corps fieldworkers, this manual is divided into three sections: skill exercises, line drawings, and directions for making art supplies from easily obtainable resources. Nineteen step-by-step skill exercises cover basic cutting, wet and dry mounting, simple drawing, freehand lettering, cutting and enlarging, tracing, and making blackboard stencils. Guidelines are also given for using blackboards, flannelgraphs, and flipcharts with village audiences. Suggestions for effective utilization of color and design describe creative ways to enhance visuals, and simple line drawings of frequently used subjects are provided for fieldworkers to trace, copy, and enlarge. The concluding section contains recipes for making such low cost materials as paste, ink, dyes, paints, rubber cement, and modeling clay. Available from EDRS in microfiche for 75 cents or in paper copy for \$9.00.

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Publications Available from Clearinghouse

The Clearinghouse on Development Communication has compiled two thematic collections of its *Project Profiles*. One, entitled *Selected Project Profiles: Agricultural Communications*, outlines 30 selected agricultural development projects that have used communications in an innovative or effective way. The second, *Selected Project Profiles: Radio*, focuses on projects using radio to promote agriculture, health, nutrition, population, education and human resources, and integrated development.

Both collections are available at no cost to those from developing countries, and for US\$5.00 each to those in industrialized countries from: Clearinghouse on Development Communication, 1255 23rd St., NW, Washington, D.C. 20037, U.S.A.

Editing and Publications Training Course

The International Rice Research Institute in the Philippines (IRRI) and the Canadian International Development Research Center are offering agricultural communicators an editing and publications training course at IRRI. The course will be offered twice in 1986 and twice in 1987. This is an intensive four-month program for eight to ten participants each session. It is a "hands-on" training experience for those already engaged in editing and publication at national or related research and extension institutions. Candidates should be 25-45 years old; have a B.S. or M.S. degree; have at least two years related experience; and be proficient in English.

For information contact: The Director of Research and Training, IRRI, P.O. Box 933, Manila, Philippines.

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short radio spots, jingles, and/or interviews; directing the same message to different audience groups (say, educating fathers and children—as well as mothers—about oral rehydration therapy); and adding sound effects and music to productions. Recommendations such as these are often provided by Network participants.

Contributions from the Network's participants are crucial in compiling subsequent packets. In fact, the only requirement for receiving the free script packets is that an enclosed information poll be filled out and returned to DCFRN headquarters. Questions from a recent survey asked which items were found to be the most useful; what crops, livestock, pests, and diseases are found in the communicator's area; what the terrain, soil, and climate conditions are like; and whether or not farmers can read and keep financial and other farm records. There is also room for comments and suggestions. This data is then collected, analyzed, and integrated into later packets.

In addition to radio broadcasts, DCFRN information has been used in newspaper articles, posters, classroom teaching, video tapes, TV shows, loudspeaker broadcasts, and puppet shows.

Overall, DCFRN has proven itself as an educational tool. Feedback from participants shows that farmers who listen to these broadcasts use the information that pertains to their particular needs. The Developing Countries Farm Radio Network is steadily growing as a development educator of small farmers as envisioned by Atkins nearly a decade ago.

To contact the Network, write to: Developing Country Farm Radio Network, English Language Division, c/o Massey-Ferguson Ltd., 595 Bay St. Toronto, Ontario M5G 2C3 Canada

or
Developing Country Farm Radio Network, French & Spanish Language Division, c/o University of Guelph, Guelph, Ontario N1G 2W1 Canada

William Amt is Program Assistant at the Clearinghouse.

Results of this comparison showed that the radio students were superior to the non-radio students in both Nicaragua and Thailand, particularly in rural Northeast Thailand (see graph). The normalized difference of .58, for students in Northeast Thailand, is of a magnitude rarely reached in educational interventions. Reducing the disparity of educational opportunity between the less and more developed parts of the country was the primary goal of this project, and it appears this experiment has very successfully achieved this end.

However, we still have not answered one of the questions posed at the beginning of the article: "Was there a noticeable decrease in lesson quality in the process of adapting the lessons to a different language and culture?" To answer this question, we turn to a comparison with Nicaraguan data.

Comparing Results

The test used for the evaluation in Thailand was adapted from one used for the same purpose in Nicaragua. Over 80 percent of the items in the Thai test and the Nicaraguan test were the same, and comparisons made here are based on only those items.

Graph 1 shows the results of the two pilot-study regions in Thailand, comparing the results from Nicaragua. It is evident that the Nicaragua study and the Thai Central Plain study yielded very similar results; the non-radio classes in both countries have close to the same achievement levels, as do the radio classes. However, an indication of a slight degradation in the quality of the lessons when adapted from Nicaragua is evident in somewhat greater differences in Nicaraguan scores between radio and non-radio classes than was found in the Thai Central Plain.

The striking fact shown on this graph is that the radio-instructed students in the Thai Northeast study gained more, comparatively, than either of the other groups—even more than the radio-instructed students from Nicaragua. Although the quality of the lessons decreases slightly in the adaptation process, it is apparent that they are still enormously successful in the remote rural regions where they are most needed.

The success of the Thai version of the radio mathematics lessons amply demonstrates that well-designed interactive radio instruction can retain its educational effectiveness when adapted for use in countries quite different from the one for which they were originally intended. It is to the credit of the Thai staff that the educational effectiveness of the original lessons was well maintained while the tone of the programs became distinctly Thai. ■

Jamesine Friend was Field Director of the Radio Mathematics Project in Nicaragua, and is currently president of Friend Dialogues, Inc., an educational consulting firm. Klaus Galda was a Field Director of the Radio Mathematics Project in Nicaragua and was Director of the Radio Science Project. Barbara Searle was Project Director of the Nicaraguan Radio Mathematics Project and is now with the East Asia and Pacific Education Division of the World Bank.

DCFRN:

A Radio Network for Small Farmers

by William Amt



As the populations of developing countries continue to grow, land formerly used for cultivating small-scale, domestic-consumption crops is increasingly appropriated for large-scale, export-oriented crops. This process puts pressure on the subsistence-level farmer to grow more crops on less land. Traditional farming methods usually cannot deal with this challenge effectively, and small-scale farmers have largely been by-passed by a majority of development programs aimed at increasing food supplies in the Third World. To help solve this predicament, the mass media are playing an increasingly important role in changing small farmers' behavior in order to improve national agricultural self-reliance, nutrition, and the welfare of small producers. The Developing Countries Farm Radio Network (DCFRN) is one such media group.

Founded in 1979, DCFRN is sponsored by Massey Ferguson Ltd., Canada, a farm implement manufacturing company, the Canadian International Development Agency, and the University of Guelph, and operates under the guidance of an Advisory Committee comprised of sponsor representatives and specialists in international development, agriculture, communications, and education. It is under the direction of George Atkins, former Senior Agricultural Commentator with the Canadian Broadcasting Corporation.

Practical agriculture related information is collected and taped for radio broadcast and supplied without cost to radio stations and other organizations involved in disseminating agricultural information for the purpose of "serving agriculture, the basic industry" throughout the developing world. DCFRN is committed to assisting small farmers to increase their food supplies by using established radio stations and other local channels of communication to spread agricultural information. The success of this effort is perhaps best evidenced by the fact that although only nine packets have been produced and distributed to date, over 500 broadcasters or organizations in more than 100 countries disseminate DCFRN information to an estimated 100,000,000 listeners in about 100 languages.

Information Gathering Process

DCFRN is divided into two divisions. Administrative headquarters and the English Language Division are located in Massey-Ferguson's Toronto office; while French and Spanish services are housed on the campus of the University of Guelph in Guelph, Ontario where, when called upon, University faculty and staff can assist with technical research on agriculture and nutrition information.

Information is assembled on appropriate and inexpensive technologies used by innova-

tive grass roots-level farmers in the developing world to increase food production, decrease post-harvest losses, and to make more efficient use of food. This information comes from on-site interviews with small farmers, farm broadcasters, extension workers, health workers, scientists, and university and government officials; printed materials; and feedback from questionnaires that are included in each information packet.

Information on agricultural or nutritional innovations must meet several rigorous criteria to be put on tape and then be disseminated by DCFRN. They should have been developed, tested, and proven in the developing world, as well as be adaptable in other developing countries. There should be no, or very low implementation costs, relying only on local resources, and requiring neither chemicals nor unfamiliar types of plants or breeds of animals.

After the materials are gathered on a variety of topics, radio scripts are prepared in a culturally and religiously neutral style in order to appeal to as many listeners as possible. A personable, informal style is followed, as if one farmer were advising another. They are written simply so that local broadcasters and other agricultural communicators—writers, agricultural extensionists, educators, and health workers—can readily interpret the materials linguistically and culturally for their audience. The scripts (including illustrations to help the communicator understand what he or she is conveying to the audience), or scripts and illustrations along with a cassette recording of the scripts are available in English, French, and Spanish. Taped segments run between two and ten minutes, depending on the subject matter. Scripts cover a wide variety of agricultural or health and nutrition issues, all within a rural development context. Agricultural topics have ranged from improving manure to getting more milk from dairy cows, from controlling worm eggs and germs that spread disease to marketing farm goods. Each packet also contains at least one segment on rural health problems.

The Blue Sheet

Enclosed in every packet is *The Blue Sheet*, DCFRN's newsletter for participants in the Network. As well as providing up-to-date information about the Network, it covers other development issues not found in the radio scripts. Topics such as Women in Development, the International Year of the Forest, and improving communication techniques are included in this newsletter. "The Professional Improvement Corner," a regular column in *The Blue Sheet*, gives pointers on how to make broadcasts more captivating for listeners. Suggestions include using the mini-drama format, (Continued on page 10)

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Briefly Noted

by Robert Vittel and William Amt

The International Rice Research Institute (IRRI) has put out a useful publication for non-English-speaking countries entitled, *Copublication: IRRI Design, Procedures, and Policies for Multilanguage Publication in Agriculture*. IRRI found that many of the people who could benefit from its publications do not speak English. This booklet explains how the language barrier is overcome via the process of copublication, whereby IRRI works closely with private publishers in developing countries to translate, layout, edit, print, and distribute IRRI materials.

Another handy publication coming out of IRRI is a very extensive compilation of titles on Third World agricultural science and production. Entitled *Publications on International Agriculture Research and Development*, this 560-page catalog comprehensively lists the major publications and audiovisuals of all the International Agricultural Research Centers (IARCs) around the world. An in-depth subject index assists the user in locating available materials in countless fields of agricultural science. Materials are listed for each of the IARCs, preceded by a short description of the center and an address. Annual reports and conference proceedings are also listed. This catalog is sure to be useful to libraries and organizations working in international agriculture. It is available in English only for US\$10.20. Both publications are available from the International Rice Research Institute, P.O. Box 933, Manila, Philippines.

For those francophones interested in a synopsis of the problems of African publishing, *Direct*, a French bi-monthly about educational technologies, contains an article in its issue No. 4/1984 entitled, *Le Livre en Afrique Francophone*. A number of statistics (for instance: Africa, with 10 percent of the world's population, produces 1.4 percent of the world's publications, while Europe, with only 4.5 percent of the world's population, produces 45.6 percent of the world's publications), as well as the arguments that existing books are too often found in the city, too academic, too expensive, and too French (or English), suggest that Africa is in need of more accessible and appropriate reading materials for a much wider reading public. *Direct* is available from ACCT-Direct, 13, Quai André Citroën, 75015 Paris, France.

Kumarian Press has published two complementary books that discuss ways in which integrated rural development projects can be made to be lasting and effective.

In *Managing Rural Development with Small Farmer Participation*, Coralie Bryant and Louise White acknowledge that participatory development is a crucial element of the general theme of development. Their book focuses more on the issues of promoting equity and decentralization, expanding and managing participation, developing local institutions, so-

cial learning, collective action, and reorienting bureaucratic attitudes. It's an excellent outline (but should not be thought of as a manual) for developers and communicators in need of ideas of how to construct a well-rooted project.

Implementation for Sustainability: Lessons from Integrated Rural Development is a somewhat expanded version of Bryant and White's book. Written by George Honadle and Jerry VanSant, its theme is that project designers, managers, and field workers must be ever-mindful of the need for local projects to continue effectively after outside support ends. By substantiating theory with case study experiences, this book analyzes both macro (national) and micro (local) alternative approaches to delivering and managing goods and services, and suggests ways of avoiding project failure. Bryant and White's book is available in soft cover for US\$7.95, and Honadle and VanSant's costs US\$22.50 for hard cover and US\$12.50 for soft cover. Write: Kumarian Press, 630 Oakwood Avenue, Suite 119, West Hartford, CT, 06110, U.S.A. ■

Both authors work at the Clearinghouse

Asia-Pacific Broadcasting Union Prizes Announced

The 1985 ABU Radio and Television prize winners were announced recently in Seoul, Korea. Three Radio prizes are awarded to promote the production of radio programs of a high standard which are intended to raise educational and cultural levels and to strengthen international understanding among the peoples of the countries of ABU members.

The prize for radio programs for children, for a production which entertains and educates youngsters under 12, was awarded to Radio New Zealand for "Grampa's Place"—an imaginative and professional production directed to an audience of three to five year-olds.

The 1985 Hoso Bunka Foundation, a Japanese philanthropic organization, awards a radio prize to a program presenting traditional music that preserves and enriches the cultural heritage of the country or territory in which it was produced. This year's prize went to Radio Bangladesh for "Jal Ranger Gaan." The program is a sensitive blend of music, narration and sound effects that simultaneously tells of the hardships of daily life faced by the fishing communities of Bangladesh.

ABU's 1985 Radio Prize, judged on the theme "Youth in a Changing Society," was awarded to the Australian Broadcasting Corporation for "The Whole World Loves You," a radio play that made imaginative and excellent use of the radio medium to examine tensions in child/adult relationships.

For a list of the television prizes given this year, 1986 entry forms, and further information write to: Asia-Pacific Broadcasting Union, c/o Nippon Hoso Kyokai 2-2-1 Jinnan, Shibuya-ku, Tokyo 150, Japan. Cable ABUNI, Tokyo. Tel. ex: J22377 (RADIO NHK) Tokyo.

(Spain continued from page 8)

Evaluators can provide the data and the analysis of data to policy-makers, but as evaluators they should not make policy decisions. Evaluation can contribute to policy-making the empirical base that policy-makers hover above. Evaluators can also push them to state measurable indicators for the results they want. It is a policy-maker's job to state the measurements needed to assess the status of their plans. If they have good evaluators working with them, they can concentrate on specific questions confident that the evaluators can provide the answers. Policy people ask the questions—evaluators answer them. Without firm policy direction, the evaluator is lost. If a project team asks the evaluator to provide direction, this is a good indication that the project itself is without direction. An alert evaluator can contribute most effectively in this situation by helping project people articulate the results they want and help them determine the corresponding measurable indicators of those results.

This is evaluation for results: evaluation is an integral part of getting any job done. No longer a post-mortem operation separate from the task of achieving the project's desired results, no longer a luxury carried out by people outside the project, no longer confused with scientific experimentation or policy analysis, and no longer a threat to the very people most committed to the project's desired results—evaluation is becoming recognized as a constructive tool that can help to achieve desired results.

Peter Spain is currently a project officer for the Academy for Educational Development, working on the PRITECH health project.

Cornell University Communication Courses

Between June 8 and July 4, 1986 Cornell University again offers its Communication Planning and Strategy (CPS) course designed for officials and decision-makers in agriculture, health, nutrition, family planning, and rural development, as well as for those in information and communication positions related to those sectors. The focus will be on designing communication strategies and mobilizing resources for communication components of projects. Enrollment is limited to 25. The course fee is US\$1400, and housing approximately \$650.

Also, a three-part video communication workshop is being offered from June 1 to July 12, 1986. The first part will give participants "hands-on" experience in how to use the portable video, pre- and post-production planning, basics of scripting, in-camera editing; a second session offers a four-week independent learning experience; and a third is a one-week workshop covering concepts related to manipulating the components of video in the electronic editing process.

For course applications contact: Dr. Roy Colle, CPS-85, Cornell University, 640 Stewart Avenue, Ithaca, New York 14850, U.S.A., Tel. 937478. Telephone (607)256-6500.

Whether in the hands of illiterates in Mali and India or television programmers in Niger and the Maldives, video is playing an increasingly important role in development work. Projects in agriculture, literacy, nutrition, community development, income generation, and family planning are using video as a tool for motivation, fundraising, bottom-up communication, community-to-community exchange, project documentation, and information dissemination.

Half-inch (videotape width) equipment is popular among villagers involved in community development work because it is lightweight, compact, portable, and easy to use. The advantages of its design, however, can at the same time be a disadvantage - if it breaks down, it must be replaced rather than repaired. The one- and two-inch equipment required for Western television broadcast standards has proven inappropriate for local production of development programming. The trend is now toward 3/4-inch videotape equipment which is portable, repairable, and appropriate for use at the community level. At the same time, the picture quality is acceptable for television broadcast when its purpose is development communication, just as it is used in Western countries for community-access channels. The facilities where technicians are trained for television broadcasting provide a place where equipment can be repaired and where video users throughout the country can be trained.

The following articles illustrate the role of video and television in development and demonstrate the potential of this resource. There is a lot happening out there.

DCR invited Diana Talbert to serve as Contributing Editor for this special section on video use in developing countries because of her particular interest in the field. Ms. Talbert has been involved in development education and communication for twenty years. For the last seven years, she has been using and promoting video as a communication tool. She has used it in teaching English as a foreign language at Harvard and Georgetown Universities; in counseling women seeking career changes; and in community-access television. Ms. Talbert is Vice President of Health and Education Resources.

Music Carries a Message to Youths

by Patrick L. Coleman

Who would have predicted that the most widely played song in Mexico in March 1986 would be a special record designed to encourage young people to be sexually responsible and not to bring into the world "children of bread and water," children they could not care for?

"It's OK to say 'no,'" is the message of a unique new family planning and health communication project designed to reach young people in 11 Spanish-speaking countries of Latin America and the Caribbean. The countries include Bolivia, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, and Peru. What makes this ambitious regional project so unique is not just the message - or the remarkable success of the first song - but the combination of materials that were produced, the way they were produced, and how they are now being used throughout the region.

The Population Communication Services project in The Johns Hopkins School of Hygiene and Public Health (JHU/PCS) has been working in Latin America and elsewhere for four years to support innovative family planning communication projects. It became clear to us that one key group was not being reached - young people aged 13 to 18 who comprise approximately 30 percent of the total population in Latin America. The fertility and sexual behavior of young people have a significant impact on their own lives, their community, their country, and the region. Early pregnancy is a major health and social problem throughout the region and the world. Adolescent mothers are ill-prepared psychologically, physically, financially, and socially to accept the responsibilities of motherhood.

(Continued on page 2)

Linking Knowledge Systems in the South Pacific

by George M. Beal and K. Robert Kern



Agriculture is the leading economic activity in most of the small island countries of the South Pacific. That vital sector embraces a remarkably wide spectrum of crops ranging from coconuts, cocoa, and coffee for export, to indigenous roots. There is also a wide variation in enterprises, production practices, types of producers, and marketing practices.

Most of the islands were governed until recently by European powers, which had led to foreign influence in some segments of island agriculture, mainly focused on export crops; little attention had been given to food crops.

When islanders gained political independence, and under quickening population pressure in many cases, the concern for food crops and the interests of small landholders took on a broader national perspective. And over the last two decades, many of the islands have put some elements of an agricultural knowledge system into place.

Government-sponsored organizations now function in agricultural research, extension, education, libraries, and communications. They tend to be unique to each country, since great distances - both geographic and experiential - stand between the real-life conditions in the islands and models from developed society systems that some tried to copy or impose.

Since 1983, the Institute of Culture and Communication of the East-West Center has collaborated with the International Service for National Agricultural Research (ISNAR) in research and continuing consultations with the South Pacific island nations of Fiji, Western Samoa, and Tonga. This work has focused on the organizations and people involved in the knowledge systems in an effort to understand how the different systems are linked, how communication flows among them, and how the exchange of information can be improved.

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Development Communication Report

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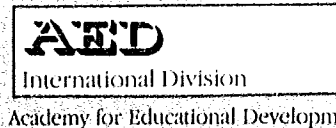
A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Academy for Educational Development, a nonprofit planning organization, and supported by the Agency for International Development, Bureau for Science and Technology, Office of Education, as part of its program in educational technology and development communication.

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Academy for Educational Development

(Coleman continued from page 1)

The Best Audience: Urban Youth

To address this problem the JHU/PCS decided to develop a regional Latin American project to make young people more sharply aware of the personal advantages to them of responsible parenthood. Socio-demographics and marketing studies have shown that young people living in urban areas are more homogeneous than any other segment of the population in the region and are easier to reach. This makes them a particularly appropriate audience for global advertising, in which one set of materials that crosses national barriers can be produced for a large group of people.

JHU/PCS put together a financial, marketing, and institutional package. The finances were provided through the U.S. Agency for International Development. Development and marketing of the materials was contracted by JHU/PCS to Fuentes y Fomento Intercontinentales, S.A. (FFI), a commercial marketing firm located in Mexico. Institutional tie-in was through JHU/PCS contacts with organizations in the 11 Spanish-speaking countries that have active programs with young people.

Analysis showed that the common denominator for young people throughout the region is music. We decided to produce two songs, each with a music video, pressed on each side of 45 rpm single records and enclosed in a full size, full-color, two-sided record jacket which folds out into a poster.

The next step was to refine the general message of sexual responsibility to a specific message, one that young people would listen to and that would not offend others. Feedback from institutions throughout the region showed that responsible sexuality is a very sensitive subject both for young people and for the whole community. Messages had to be acceptable to the social, cultural, and religious values of the countries and to the requirements of the mass media.

Focus groups with young people indicated that youth would listen to the following messages: 1) young people should be sexually responsible for their actions; 2) it's OK to say 'no,' that is, the concept of postponing sex; 3) young men as well as women should be sexually responsible; 4) young people can go to specific identified places for professional counseling or guidance; and 5) positive role models are helpful for young people who want to be responsible.

Once the messages were developed, we had to find persuasive messengers. The concept of youth speaking to youth about sexuality has been demonstrated to be most convincing. Thus, with the help of professional recording companies, JHU/PCS and FFI looked for young singers who were commercially successful, who believed in the concept of responsible sexuality, and who wanted to participate in this type of project. The final selections were Tatiana, a young Mexican woman who is rapidly developing into a commercial star, and Johnny, a young Puerto Rican man who was previously with the most popular young Latin American singing group, *Memudo*.

Once the artists and the messages had been identified, a contest was held for the music and

lyrics, with more than 20 professional composers participating. The choice was narrowed to five songs, which were pretested in rough form, with three different groups of young people. The two favorite songs, *Cuando Estamos Juntos*, "When We Are Together," by the Argentine composer, Juan Carlos Norona, and *Detente*, "Wait," by the Mexican composer and singer, Prisma, were recorded. Music videos and radio and television commercials were then produced.

An underlying concern built into the design of this project was that the materials must appeal to young people as popular songs, not as educational materials. We wanted the songs to be played on radio stations just like any other popular song, and the music videos to be played on television stations just like any other video. We expected that the radio and television commercials would be played only if the radio and television stations were paid to do so. At the same time, we hoped for some collaboration by the government-owned educational stations and perhaps by a few socially conscious media managers and owners.

The marketing plan was conservative. We estimated that the songs would be played an average of three times a day on radio stations playing Spanish language music, and television stations would broadcast the music videos, while newspapers, magazines, and journals would occasionally publish articles related to the project. This was all considered "free" promotion for the products, based on their commercial viability.

Marketing Plans Widened

Support for a larger marketing plan came from an unexpected source. EMI Capitol, the record company for Tatiana, the female singer, wanted to put the two songs on her next album which would be launched simultaneously with this project. A major multinational recording company was willing to put its prestige and the skills of its marketing and promotion departments behind a social communication project! As a result, radio stations would feel they were not taking any risks by playing a song with a social purpose; they would consider that these materials were commercial products with a social message incorporated into them. This was the very concept that we were trying to promote. The record company's support also made the materials more available because they could be sold through a vast commercial network, not just through the institutions we were working with.

The marketing of what became known as the "Tatiana & Johnny Project" included sending:

- copies of the record to 3,020 radio stations,
- copies of the record and music videos to 250 television stations,
- press kits to 350 newspapers, magazines, and journals,
- brochures about the project to 3,500 media representatives throughout the region,
- seven bimonthly press releases to radio, television, and press personnel throughout the region.

(Continued on page 3)



At the same time JHU/PCS, through FFI, contracted with key radio stations in the 11 countries to broadcast the two radio spots (commercials) developed for the campaign. No funds were available for broadcasting the television spots that were developed, as the cost is exorbitant. It was hoped that local institutions could persuade stations to allot some free time to show them. The first spot promoted each song. The second spot also included a message at the end linking each institution in the 11 countries to the Tatiana and Johnny materials, and inviting young people to call, write, or visit these institutions for additional guidance or counseling about sexuality.

The local institutions were provided with copies of the 45 rpm record to give away to promote activities with young people. Since we thought the selected institutions would be the only source of the single record, we hoped young people would be attracted to it and want the record. The local institutions were encouraged to give the record only to those whom they felt were truly interested in this theme and to set up contests, focus groups, call-ins with radio stations, and other promotional activities. They also were urged to work with the record company representative in their areas to develop joint activities.

EMI Capitol agreed to pay JHU/PCS royalties for the right to use the two project songs as part of its commercial distribution of Tatiana's record. This provides more promotion and visibility for the messages as well as income to be reinvested in further activities for young people in the region.

Enthusiastic Reception

Initial reaction to the project has been overwhelming. In Mexico, even before the first song was launched, the most popular live television variety program—reaching some 150 million people every Sunday—asked to premiere the first video. Immediately, the song was enthusiastically accepted by young people and radio stations. Our initial calculation of three radio broadcasts per day was far short of reality—which sometimes reaches 15 to 20 broadcasts daily. Monitoring by record companies and radio stations in Mexico shows that the song was number one on the hit parade within six weeks after its release.

The song is also becoming a commercial hit in other countries. As of March 1986, the local institutions reported that letters and requests for their services increased anywhere from 200 percent to 2,000 percent, all within two to four weeks of initial promotion. This increase occurred before direct local institutional promotion began. In addition, the radio stations and the record company have received calls and letters of thanks from young people.

Lessons for the Future

Several lessons have been learned from this project that can guide future social development communication projects.

1. Choose the most appropriate medium to reach the intended audience, in this case, popular music.
2. Enlist professionals experienced in the chosen medium to be sure of the best available resources, both human and material.
3. Develop a high-quality product that will attract the commercial sector. Commercial support for a social message defrays expenses, assures wider dissemination of the message, and may generate income for program expansion.
4. Use a medium, in this case popular music, which has a big regional and national audience. This enables a large-scale project to draw on resources not readily available to a local organization working alone and brings additional attention to the project because of its international scope.

JHU/PCS worked closely with FFI and local institutions to ensure that the products of this project would be responsible and socially acceptable. Mixing the commercial and social sectors worked in this case because both groups cooperated to achieve the results each wanted while respecting the interests and needs of the other. ■

Patrick L. Coleman is Project Director of Population Communication Services, The Johns Hopkins University, Baltimore, Maryland. He has worked in social development communication for more than 12 years, primarily in Latin America.

Making an Agricultural Video

by Melissa Beck-Yazman

Winrock International Institute for Agricultural Development, a nonprofit organization committed to agricultural and rural development, has been involved in video production since 1976. We have focused on agricultural education and training, information dissemination, and promotion of appropriate agricultural techniques initially in the U.S., and now increasingly in developing countries.

At the request of control Data Corporation (CDC), Winrock International produced an educational course, *Dual-purpose Goat Management Series*, for Caribbean and potentially for Latin American countries which offers a series of nine videos on basic goat husbandry. The audience was to be agricultural extension agents and farmers in these two regions who would learn how to improve milk and meat production from goats.

Site Selection

The video was filmed in Haiti and Mexico. These locations were chosen for two reasons. First, they are representative of the environment of the primary (English-speaking Caribbean) and secondary (Latin American) target audiences. Secondly, Winrock had contacts in both Haiti and Mexico who could serve as hosts and counterparts for the production team.

Winrock's Goat Improvement Project in Haiti provided an excellent Caribbean location, with local farm workers who were available for on-camera talent, and a project manager who also served as the customs liaison, logistics coordinator, and interpreter. In Mexico, professional contacts through Winrock led us to a veterinarian who teaches at a university in Mexico City and owns a goat farm. He provided the location, talent, and subject-matter expertise at this site. Local farmers and extension workers in both countries were eager to cooperate as on-camera talent.

Preproduction Considerations

We faced different preproduction problems in each country. In Haiti, we were able to bring in our own equipment and personnel. In Mexico, however, the customs procedures proved so complex that we risked having our equipment impounded. To avoid this, we rented video equipment in Mexico City where both equipment and trained video specialists are readily available.

Scouting the selected locations prior to the actual filming gave us the chance to carefully plan the scenes we would take at each location. We were also able to get information on transportation, equipment rental, reliable battery supplies, housing accommodations, and other preproduction concerns.

Script Development

The narration for the videos was fully scripted which allowed for the possible future dub-

(Continued on page 4)



Tatiana and Johnny performing in the music video Detente.

Video: A Development Tool for Women

(Beck-Yazman continued from page 3)

by Deborah Ziska

"The 'New Decade' will see women overcome their lack of experience with the media technology, realize its potential, and use it to improve their social and economic condition." Heather Royes, Ph.D., Jamaica

For nearly 40 years, OEF International (formerly Overseas Education Fund) has been working in developing countries, training low-income women to turn simple skills and local resources into income-producing business enterprises. OEF also develops and field-tests unique training methodologies focused on the needs of these women.

Based on its investigation of the use of various communication technologies to resolve a wide range of development problems, OEF has concluded that video offers a novel opportunity for women to become more active participants in program design, development, implementation, and evaluation. Current programs throughout the developing world are successfully using video to increase women's participation in social and economic development. OEF found that the potential of video for women is clear in areas such as instructional modules in small enterprise development and group organization; presentation of training techniques for working with women; analysis and evaluation of training techniques in the field; integration of women beneficiaries in project evaluation; use of video equipment as a communication tool by women themselves; marketing and fund raising; and the motivation and mobilization of women to implement their own community and business enterprise development.

Planning the Program

In July 1985, with funding from the Women in Development Office of the U.S. Agency for International Development and the Kunstader Family Foundation, OEF convened a meeting in Nairobi, Kenya to discuss video as a development tool for women. Women with a wide spectrum of experience in the use of video for development joined in. Representation ranged from the sophisticated Food and Agricultural Organization—supporting agricultural training programs that use integrated communication systems featuring video, to simple, yet effective uses of video in Nepal for project evaluation featuring interviews with women beneficiaries.

Participants included Subhadra Belbase of Nepal, Ayesha Imam of Nigeria, Sima Wali, an Afghan refugee in the U.S., Clara de Souza of Peru, Georgina Aviles Marin of Mexico, Elma Lisk-Anani of Sierra Leone, Heather Royes of Jamaica, as well as Xaio Chun-Lin from the People's Republic of China who had learned video production from the late Martha Stuart, widely recognized for having successfully put video technology in the hands of hundreds of women throughout the developing world. (See "Video in the Village" elsewhere in this issue.)

We shared experiences and explored how women could benefit more from this technology. At these meetings it was also decided to hold a workshop at the *NGO Forum '85*, which met concurrently with the *UN Decade Conference on Women* in Nairobi. A report generated from the meetings preceding the *Forum* includes case examples, advantages, and obstacles to using video for women in development programs, some of which are summarized below.

Advantages

1. Video can be used at convenient times and places.
2. Video is effective with illiterate or multilingual groups.
3. Video can bridge cultural differences, helping women to share common concerns and goals.
4. Video facilitates group discussion, motivating women to work together and to organize for community development.
5. Video boosts women's self-confidence and encourages their self-development.
6. Video facilitates communication between funders and women beneficiaries.
7. Video simplifies technical information and improves comprehension of such materials.
8. Video can be a cost-effective training tool.

Obstacles to Video Use

1. Electric power is often lacking or erratic in developing countries.
2. The communication components of women's projects are poorly funded.
3. Technical training is lacking, particularly for women.
4. Spare parts for video equipment are difficult to find in developing countries.
5. Compatibility of video standards and formats between organizations and countries is poor.
6. Importation restrictions and theft of equipment in developing countries aggravate the equipment shortage.
7. Cost of equipment is high when compared to slidetapes, flannelboards, and radio.
8. Video is often controlled by urban "elites" or foreign organizations.

The advantages far outweigh the obstacles for women using video when considering the opportunity it gives them to control a medium and to communicate with each other across cultural, linguistic, and geographic boundaries.

To obtain OEF's 40-page report, *Video Technology Applications for Development Projects Designed to Benefit Women*, send a US\$7.50 check payable to OEF International, 2101 L Street, N.W., #916, Washington, D.C. 20037, USA. Please add 20 percent to cover airmail costs where appropriate.

Deborah Ziska is Director of Media and Video Projects, OEF International.

bing of a second language without editing the video again. Since the primary audience lives in the English-speaking Caribbean, a narrator with a West Indian accent was selected.

When we make a video in one language only, a formal script is not prepared. Instead, an outline and storyboard are developed, but the "narration" is obtained from interviews which are then edited and merged to create the message. For example, farmers are asked questions that are designed to elicit specific types of answers; the result is farmers teaching farmers. While using nonprofessional talent is risky business—not all farmers have golden voices—we have had remarkably good luck. Generally, they are relaxed and readily discuss topics familiar to them.

Since Winrock has in-house production facilities and uses a small crew, costs for video projects have averaged \$300 to \$600 per finished minute. The production crew usually consists of just a videographer, either a writer or an audio technician, and a subject-matter expert. Working with such a small crew requires careful planning and flexibility among those involved. The video specialist and subject-matter specialist must have an understanding of each other's expertise, trust each other, and be aware of their responsibilities from the outset.

Final Distribution

Control Data has responsibility for film distribution and field testing of the *Goat Management Series*. Although the evaluation results have not yet been released, Winrock staff has used the series in workshops and seminars and, so far, feedback has been positive. Most of our videos are handled by the donor agency since Winrock does not have the staff or resources to duplicate and distribute what it produces.

Although there are unique problems associated with using video in developing countries, this rapidly evolving technology has already proven itself to be an extremely popular and effective tool for transferring agricultural technology. ■

Melissa Beck-Yazman has been a communications specialist for Winrock International for five years.

Video Education Articles

Direct, a bimonthly bulletin published in French by ACCT (Agence de Coopération Culturelle et Technique), supplies its readers with current information on various applications of educational technologies worldwide. A recent issue (#6/1985), focuses on educational video, with articles on topics such as the best uses of audiovisuals in education; descriptions of the different educational video hardware now available; the evolution of video training; and the strained relationship between the pedagogical and technical aspects of educational video production. This and other issues of *Direct* are available from: ACCT, 13, Quai André Criteën, 75015 Paris, France.

Taking Video on the Road in the Philippines

by Jean E. Andersen and
Anita H. MacDougall

The experiences of the Nutrition Center of the Philippines (NCP) suggest that the effectiveness of development communication can benefit from a systematic approach and the evolution of "high-tech" into appropriate technology.

It was ten years ago that the Nutrition Center of the Philippines decided to test video-vans (vehicles containing video playback equipment that are driven to communities to promote social programs through videotapes) as a key component of their nutrition program for preschool children. After a two-year pilot project demonstrated effectiveness in experimental versus control villages, the program was implemented in critical areas nationwide. Continuing evaluation has shown not only where improvements are needed, but also a persistent success in increasing mothers' nutrition-related knowledge and improving preschoolers' nutritional status. Cost-effectiveness studies have indicated that these improvements have apparently been accomplished at a cost comparable to or less than other types of field interventions that have such data.

Impact Evaluation

In 1979, a comparative study was made among rural villages: with no intervention (comparison group); with only a village nutrition worker (BNS-only group); with a village nutrition worker and short exposure to the video-vans (VTRS group); and with a village nutrition worker and longer exposure to the video-vans (VTRL group). Results comparing these groups showed significant differences related to amount of intervention. For example, mothers in the VTRL group were 55 percent more likely than mothers in the comparison group to describe feeding their children meals containing items from all three basic food groups recommended in the videos. Mothers in the VTRL group were nearly five times more likely than mothers in the BNS-only group to name "Nutri-Pak" (a locally produced food supplement providing 50 percent of the daily required protein and 30 percent of the calories) as a good snack food for their children. They were 71 percent more likely to correctly describe the features and benefits to their children of "Nutri-Pak" as it was presented by the village workers and videos. There were also significant differences in child nutritional status consistent with amount of intervention. For example, regarding percent standard weight for age, using the Harvard standards and the "Gomez Classification" and comparing VTRL to BNS-only, the VTRL group showed 25 percent less moderate-to-severe malnutrition and 29 percent more mild malnutrition-to-normal nutrition. The average number of children weighed per group was 506. This demonstrated success of the video-van concept gained support of donor agencies which supplied 30 more vans.

In a follow-up study in 1981 in the same villages, improvements in nutritional status continued, with an additional 17 percent decrease in moderate to severe malnutrition and a 12 percent increase in mild malnutrition to normal nutrition. Similar results were obtained in another impact study of 48 rural villages receiving the same intervention in another part of the Philippines with measures taken in 1981, 1982, and 1983.

Careful accounting was done on all expenses related to the program in 1981: management, field personnel, training of field personnel, development of videotapes and other materials, and daily operating expenses, as well as a five-year depreciation allocation for video playback equipment and vehicles.

It is difficult to make comparisons between studies regarding cost-effectiveness. Calculation standards differ, methods and measurement definitions differ, as do sample sizes, price data, and cost of materials depending on seasonal and yearly changes. Nevertheless, some data has been compiled for comparative purposes from programs similar to the Nutri-Bus project: mass media and mass media with local workers. One example is from a 1981 mass media nutrition education project also implemented in the Philippines. Per-child costs per year where mothers' reports indicated positive changes in nutritional practices came to US\$15-\$29; whereas the Nutri-Bus project calculated a US\$5 per-year, per-child cost where mothers reported similar changes in nutritional practices.

"... a unique information gathering and feedback system has been developed to support this project."

Communication Model

Major factors in the success of the Philippine program are certainly the abilities, talents, and dedication of the Nutrition Center staff and management. Another factor that may help account for the continuing success of this intervention model is the use of the "ABC Model for Developing Communication to Change Behavior." This model utilizes a systematic process of developing communication materials built upon the:

- analysis of the abilities, experiences, beliefs, customs, current practices and preferences of the audience (mothers of preschool children);
- explicit specification of the behaviors or skills mothers need in order to improve the nutritional status of their children;
- definition of how much behavior change of each type will constitute a worthwhile level of effect;
- analysis of each behavior or skill sought and how the mothers can best be helped to learn to make the necessary changes;

- development of training materials that provide active participation of the learner and frequent opportunities for positive feedback to increase learning and foster self-reliance;
- emphasis on communicating through realistic visuals;
- careful pretesting and revision of draft materials until they are effective in bringing about the changes sought;
- periodic, statistical field evaluations.

The development process outlined above is guided by a series of worksheets and aids that help the Nutrition Center staff perform each step, after they have completed a ten-week training program. To deal with the problem of turnover among trained staff and provide quality control and consistency of what is taught, microcomputer-based tutorial programs are being developed to teach the use of the "ABC Model" to each new person.

All audience analysis, design, development, and production of the videotapes is done by NCP staff. Topics include growth monitoring, oral rehydration therapy, breastfeeding, immunization, family planning, and nutrition. Tapes are shot either on location or in a small studio at NCP and produced in six dialects. The studio has two complete, portable 3/4-inch U-matic systems with cameras and an editing system. Half-inch playback machines are used for the video-vans.

Information and Feedback System

After the systematic development and production of the video modules, a fleet of Jeep-type vans (called Nutri-Buses) regularly visits the villages. Each van is equipped with a TV monitor, Betamax player, and public address system. A driver-technician operates and maintains the vehicle and the audiovideo equipment. A "communicator," who is a registered nurse with one month's training in communication techniques and community organization, rides each van. She pauses the tape at designated points, using the loudspeaker system to encourage discussion and decisions from the viewers. She provides feedback and reinforcement during these discussions and solicits comments about the videotape. She also sells Nutri-Pak, at a nominal price, after the video showing. Nutri-Pak is produced by the Nutrition Center and priced to cover operating costs.

With equipment, vans, and personnel deployed from one end of the Philippines to the other, it was clear that innovations would be necessary to keep the vans running on schedule, the video equipment in good working order, videotapes reflective of local needs, supplies available, and the personnel motivated. To deal with this challenge, a unique information gathering and feedback system has been developed and tested. During village visits the communicator records on a preprinted checklist, information about the village, arrival and departure time, audience size, audience interaction responses, video playback quality, Nutri-Pak sales' date, and materials distributed to

(Continued on page 6)

the village nutrition/health worker. A new activity, added since the last impact evaluation study, is a counseling interview by the communicator with two mothers of malnourished children in each village. This allows the communicator to gather monthly information which includes child's weight data, mother's interview answers, household observations, and advised nutrition and health care actions. The data gathered by the communicator on her two households per village per month is also entered on a special preprinted checklist.

At the end of each month the communicator working in the provinces sends her completed forms to Manila. Throughout the archipelago of the Philippines there are currently 60 communicators who each cover 40-45 villages per month. They reach 5,400 targeted children in 2,700 villages, resulting in 8,100 checklists containing a wealth of information about the population in the provinces that would not previously have been easily accessible. Upon arrival in the capital, the pencil-coded information on the checklists is read by an inexpensive optical mark-reading machine connected to a microcomputer.

The information produced by this system has greatly improved the project and its day-to-day administration. Village communicators send the mothers' interview responses to the project managers who generate computerized summaries of this information. This is then shared with the communicator. This cycling of information enables a level of communication and support that can address the needs of the mothers and the workers in the provinces. Software used in the program is a mixture of custom and off-the-shelf packaged programs. Hardware used is a team of Apple II and Macintosh computers.

Several levels of monthly feedback letters and reports are generated by the computers, including information on previous months for comparison, and then provided to:

- the communicator – a summary of performance data plus computer-generated messages congratulating good performance and suggesting performance improvements; emphasis is on providing support and information to improve the nutritional status of the children;
- the communicator's supervisor – a graphic summary of the communicator team's performance, allowing rapid comparison of communicator performance; overall area summary data are also presented;
- middle management – copies of an individual communicator's letters and area progress reports which can be used to guide support to the area coordinator, communicator, mothers and children through training, recruiting, materials development or program revisions;
- senior management – graphs of performance across areas, plus a database which can be queried regarding the trend of the children's nutritional status, diseases prevalent, mothers' nutrition and health care knowledge, frequency of videotapes shown, effectiveness of the videotapes, reasons why visits were not conducted, food supplement sold and other activities of the communicator. Senior management

can now carry out the managerial cycle of planning, implementing, and evaluating the project's overall viability and its individual components internally, and also report to external funders and agencies.

A carefully controlled, one-year pilot study using a similar video-van approach was done in rural Thailand. Significant differences were found in nutritional status between experimental and control groups as well as differences regarding knowledge and reported practices, especially for breastfeeding. The Thai project will be reported in a future issue of *DCR*.

For further information about this project write to: Development Communications Consultants, P.O. Box 515, Oyster Bay, New York 11771, USA.

Jean E. Andersen is president of Development Communications Consultants (DCC) and specializes in communication for behavior change.

Anita H. MacDougall is vice president of DCC and specializes in management information systems.



A Daily Newspaper for The Gambia

A daily newspaper in The Gambia is now a reality thanks to support from Unesco's Special Fund, the International Programme for the Development of Communication (IPDC). Replacing a weekly, *Gambia News Bulletin*, the inauguration of a daily paper in November 1985 was preceded by a one-month training course for 12 local journalists and the installation of offset printing equipment. The paper will receive stories from the Gambia News Agency which was recently installed as part of the West/Central African New Agencies Development (WANAD) network. This US\$2,500,000 project, a joint effort by the Federal Republic of Germany and Unesco, enables news collection and dissemination, particularly between urban and rural areas, in eight countries (Benin, Congo, The Gambia, Ghana, Guinea, Mali, Niger, and Nigeria) with a combined population of 115 million people. WANAD, in turn, will provide a solid foundation for the Dakar-based Pan African News Agency (PANA) for news exchange throughout the continent and with agencies outside the region.

(Reprinted from Unesco: Facts and Figures No. 7, Oct/Dec 1985)

Broadcast Training in the Pacific

Another collaborative effort between IPDC and a Federal Republic of Germany foundation, Friedrich-Ebert-Stiftung (FES), will soon provide training for broadcasters from the South Pacific island nations of Papua New Guinea, Western Samoa, and Fiji.

This US\$1,200,000 project, with training provided by the Pacific Broadcasting and Development Project (PACBOARD), calls for the establishment of subregional training bases using already-existing national facilities to train skilled personnel to plan, manage, and operate broadcasting networks oriented to development goals in the Pacific Island States.

Call for Papers

The Fifth World Telecommunication Forum, Part 2, Technical Symposium is scheduled for October 22-27, 1987, in Geneva, Switzerland. This international gathering of professional engineering societies has been organized by the International Telecommunication Union and will be held in the framework of TELECOM 87. The forum theme is *Telecommunication Services for a World of Nations*. A limited number of papers will be accepted for presentation. They must be unpublished and based on original research, developments, and approaches carried out in the period between TELECOM 83 and TELECOM 87, and should be about new equipment, systems, networks, or services. The submission deadline for the initial summary paper is September 1, 1986.

For a description of technical subject areas and guidelines in preparing the summary write to: FORUM 87 Secretariat, International Telecommunication Union, CH-1211 Geneva 20, Switzerland.

*Development Seminar
Offered*

The University of Minnesota is offering its annual *Development Project Evaluation Seminar* from September 15-26, 1986. This two-week course focuses on a practical approach to project evaluation. Through presentations, training exercises, case analyses, and group interaction, participants will consider evaluation approaches and strategies for establishing evaluations useful to decision-makers. The cost is US\$2200 for courses and lodging. Meals and transportation are extra. For more information contact Fred Hoefler, 405 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, Minnesota 55108, USA.

**Attention
DCR Readers**

The Clearinghouse is cooperating with the Economic Development Institute (EDI) of the World Bank to make available to our readers information about a new series of twenty multimedia training modules on water supply and sanitation. You will soon be receiving a mailing from EDI announcing this recent release. We hope this information will be useful to those of you who are interested in project planning, analysis, and operation.

Video in the Village

by Sara Stuart

"At first we were very afraid of these video machines. Now we almost love them," Lellaben Datania, vegetable vendor and member of the Self-Employed Women's Association (SEWA), Ahmedabad, India.

For more than ten years, Martha Stuart Communications, Inc. has trained literacy teachers, women's organizers, scientists, and family planning workers in developing countries to use video. Their videos on topics such as a village that is energy self-sufficient, a community health center, the child labor issue, and a women's cooperative are shown in communities to exchange experiences and to promote local development.

Mali Tries Video

Two projects, one in Mali and the other in India, illustrate the possibilities in this kind of local-level approach under quite different circumstances. In Mali, as part of a rural women's literacy project funded by the United Nations Fund for Population Activities with technical assistance from Unesco, a video team was equipped and trained at the National Department for Functional Literacy and Applied Linguistics (DNAFLA). The literacy project began in 30 villages and has since grown to more than 60 villages in three regions. While teaching literacy, they also give information and training on infant nutrition and health care, income generating activities, and marketing skills.

Of the fifteen video workshop participants, there were five women who organize village literacy classes and train adult literacy teachers, and ten male "technicians." None of them had had any experience with video, although a few had film experience. They have grown into an effective and committed video team that travels for weeks from village to village, making tapes and then playing them back in other villages. They take along one video camera, a portable recorder, batteries, the necessary cables and microphones, a generator, and a large monitor.

The video team tapes exemplary literacy classes that are then shown in other villages, either to supplement classes where there are no teachers or to help train teachers. Tapes for discussion topics in classes can be made in local languages or with French voice-overs. One video recorded a day care center, another a malaria clinic describes symptoms and treatment, followed by mothers giving their children preventive medication.

At the UN Decade Conference on Women in Nairobi, the head of the rural women's literacy program in Mali, Mme. Dembele, described some of the successes she attributed to video. Many women did not or were not allowed to attend the one-week literacy training program in a neighboring town. But after their villagers saw the video tapes of the women who were just like themselves and had participated in the training, the following years all the women attended. Once the women in the 60 villages

realized that the video was in their language and that it reflected their reality, they were eager to participate. In response to the challenge regarding the appropriateness of this sophisticated and expensive technology to Mali, Mme. Dembele once said, "True, with the money it costs to buy this equipment we could dig ten wells, but with this equipment we can organize 100 villagers to dig their own wells."

India's Success

SEWA, the Self-Employed Women's Association, is a trade union for poor self-employed women in Ahmedabad, Gujarat, India. More than 24,000 street vendors, small-scale producers, and laborers are members of SEWA. The organization provides its members with skills training and cooperative mechanisms to aid in the production and marketing of goods, as well as child care, life insurance, and maternity benefits. It advocates women's rights before the authorities and operates SEWA Bank, a cooperative bank that extends credit to self-employed women. SEWA has become a model self-help organization and is extending its activities into rural areas and to other states.

In 1984, with funding from the U.S. Agency for International Development, twenty members of SEWA were trained to use video equipment; a second workshop on editing is scheduled for later this year. Video training assisted SEWA at a time when the organization was growing rapidly in numbers and scope. It has enabled SEWA's leaders to save time by using videos to explain their work, to communicate effectively across distances, and to organize more effectively.

One-third of the video workshop participants were illiterate and another third had less than a high school education. They included women of all ages, Hindus and Moslems, a

vegetable vendor, a photographer, and a carpenter, as well as several top SEWA leaders. The training workshop was an unqualified success and resulted in the formation of a cooperative called Video SEWA. Benefits have already been realized from the cooperative. For example, one of its video programs about a dispute between small scale vegetable vendors and the city, was shown to a municipal leader and contributed to an equitable resolution. This municipal leader had never really listened to these women before and probably never would have if not via videotape. The vegetable vendors themselves would not have spoken freely and forcefully to a city official but could do so to the impersonal video camera.

The Video Challenge

Interaction between television and video has been a positive and productive experience especially for the Malian and Indian video teams. In Mali, video was introduced in advance of television's arrival in the country rather than in reaction to it. Fortunately, the DNAFLA video team was well established and respected prior to television's advent. As a result, Malian Television requests DNAFLA's development-related programs for broadcast. DNAFLA continues to reach an audience not served now and not likely to be served by TV for quite some time. In the case of India, television represents an important potential market for Video SEWA's programs.

Self-directed community-to-community development communication can succeed dramatically and can contribute to real improvement and change through human exchange. However, this is sometimes perceived as a loss of control—a loss of power or authority by government leaders. This is when it is crucial to have support and a clear understanding of programming aims by leaders on several levels. Both DNAFLA and SEWA were able to garner this kind of very necessary support.

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A literacy class in Mali is videotaped for use in other villages.

Equipment

Maintenance and repair are no longer the issues they once were. In pre-television Mali, there was a lack of local repair expertise, test equipment, and spare parts. Once when an editing deck broke down, it had to be returned to the factory in Tokyo. Despite this setback, DNAFLA's video team operated successfully for three years with only one camera and one portable deck. Since then, they have received additional equipment. With the advent of Malian television in 1984, service and repair have become more accessible. Video SEWA has required only one minor adjustment on their equipment. In Ahmedabad, there are adequate repair and maintenance facilities and they are well supplied with spare parts.

When operated by teams who have been carefully and thoroughly trained, 3/4-inch, low-band video equipment has proven to be reliable, sturdy, and able to function in a wide range of climates. It also produces broadcasts with quality similar to that of cable television in the USA. The teams trained by Martha Stuart Communications, Inc. over the past eight years have been equipped with basic 3/4-inch production and editing equipment, a generator and multi-standard playback equipment, to facilitate exchange of programs, and to make them locally on 1/2-inch, either VHS or Beta.

While video technology is changing rapidly, this configuration continues to meet the goals of reliable, durable, and easy-to-operate equipment which affords high quality and flexibility over several generations of a standard conversion.

Spreading the Word

The Village Video Network, co-sponsored by the United Nations University and Martha Stuart Communications, Inc., was founded at a meeting in Bamako, Mali in 1982. The founding members come from many backgrounds and 14 countries. They established the network to promote video as a tool in support of development and to facilitate the exchange of tapes between people who are involved in finding solutions to community-level problems.

Small-format video has many useful qualities. It is easy to use, functioning equally well in the heat and dust of India and in the wind and snow of northern Quebec. The equipment is durable and tape stock is reusable. There are no processing charges. Immediate playback capability gives the users flexibility to revise on the spot to fit their needs, and to show the same material again and again. With video, there are no literacy hurdles. Most importantly, video teams can travel directly from place to place, unburdened by the need to return to a central clearinghouse, laboratory, or manufacturing center. This freedom reinforces a communication process that helps individuals and communities to extend the reach of their voices.

Sara Stuart is the president of Martha Stuart Communications, Inc., New York and coordinator of the Village Video Network.

Video Library Established

Health and Education Resources, a nonprofit company with 18 years of experience in communications and training, is establishing the Audiovisuals for Development Clearinghouse (AVDC) which will include a video library. AVDC is seeking videos by and for development projects to provide people interested and involved in video for development the benefit of each other's experience. AVDC will share your descriptive material and house your videos, making copies available upon request. To participate in this communication network, please send AVDC copies of your videos, and your project information.

AVDC would also appreciate your cooperation in answering the following questions to help determine the needs and the potential for video in development and how those needs may best be met.

Video Survey

Name: _____

Organization: _____

Address: _____

1. Do you use video? yes _____ no _____ .
If yes, do you use it for training _____ , project documentation _____ , information dissemination _____ , communication between sites _____ , motivation _____ , fund raising _____ , education _____ , other _____
2. Do you produce your own videos? yes _____ no _____ .
Are you interested in producing your own videos? yes _____ no _____ .
3. Would you like to know more about how you can use video in your programs?
yes _____ no _____ .
4. Are you interested in seeing how projects in other countries are using video?
yes _____ no _____ .
5. Do you want skills training in video production? yes _____ no _____ .
6. What video equipment do you have access to:
VCR _____ , TV _____ , monitor _____ , camera _____ , editing system _____ ?
7. What system (NTSC, PAL B/G, SECAM K/L, etc.) _____ ?
8. What format? VHS _____ , Beta _____ , 3/4-inch _____ .
9. Can you get repairs and parts in your country? yes _____ no _____
10. What power sources do you have? electricity _____ , battery _____ , solar _____ , other (specify) _____

Please return survey and any comments to **Audiovisuals for Development Clearinghouse, Health and Education Resources, 4733 Bethesda Avenue, #735, Bethesda, MD 20814, USA.**

Appropriate Technology Mini-Library Continuing

TRANET, the Transnational Network for Appropriate/ Alternative Technology in Rangeley, Maine, has received renewed funding of US\$8,000 from Unesco to ship its mini-library on appropriate technology to ten more developing countries.

These one hundred-volume conventional libraries will go to institutions in Botswana, Papua New Guinea, the Philippines, Sri Lanka, Sudan, the Yemen People's Democratic Republic, and Zimbabwe, bringing the total to 79 libraries shipped since 1980.

Each library consists of 100 core books suitable for a technical library in a developing

country. The collection contains appropriate technology materials in food production, animal husbandry, housing, home and farm techniques, village crafts and industries, energy, transportation, health, and nonformal education. Most are do-it-yourself manuals, some are general resource guides, and others deal with concepts of appropriate technology, participatory development, and local self-reliance. TRANET has also developed a 25-volume energy supplement to the basic library.

For more information contact Janet Wilcox, TRANET, P.O. Box 567, Rangeley, Maine 04970, USA.

My Experience Teaching Video in the Maldives

by Doc Mayer

When I learned that I had received a four month position as a United Nations Development Program television consultant in the Maldives – a tiny Islamic island nation with a population of only 180,000, west of Sri Lanka in the Indian Ocean – I searched for literature about it and the conditions under which I would be working. The terms of reference used a lot of words that added up to one mighty cry of "Help!"

My assignment was to teach video production skills at a TV station, something I had done during a two and one-half year consultancy in Zimbabwe. I arrived in country with some production textbooks, my trusty copy of Herbert Zettl's *Sight, Sound, Motion*, and my fingers crossed. My arrival was cause for some interest; the TV station thought they had selected a man – my name having caused the confusion. I was concerned how they would relate to a woman, but did not find it as difficult as I had feared. The Maldivians came to accept me as an American who could teach them things about television that they wanted to learn.

TV Maldives

TV Maldives (TVM) broadcasts almost exclusively for the capital city of Male, with a population of 40,000. There are four and one-half hours of programming daily – from 4:30 p.m. to 9 p.m. Approximately one hour of these programs is generated locally. The remaining materials are free – mostly documentaries from Western countries. The station also broadcasts English- and Hindi-language feature films that come in VHS format from local video clubs. These are usually fifth or sixth generation (duplicate copies) of tapes that are often low quality and in poor condition. (The Maldives, like many other developing countries, does not recognize copyright laws imposed by other countries.) Also, there never had been a general broadcast policy established, either by the station management or by the government. Broadcasting ended each evening at 9 p.m., at which time local movie theaters opened their doors. Apparently, there was a tacit agreement to limit competition between television and commercial theaters.

The production staff at the station consisted of two full-time producers, two assistant producers, six cameramen and assistants, and a number of technicians. The technicians handled sound as well as broadcast transmission equipment. The all-male production staff had received some technical training, mostly outside of the Maldives, but had little or no production training. The Japanese had given them broadcast equipment and a studio, but little attention was paid to program content or to developing a cohesive broadcast plan.

The only locally produced programs were children's shows in which students came into the studio to sing, dance, and tell stories be-

fore the camera. There also was a poorly produced half-hour educational program that prepared students for their Junior Certificate exams. A ten-minute summary of international news was taken from the satellite and broadcast a day later along with five minutes of local news. Most original material was prepared in Dhivehi, the local language, although some of the news and educational programs were in English.

Training Preparations

My job was complicated by the fact that the staff had very diverse backgrounds, educations, and levels of interest. As Maldivians tend to be very direct and independent, some promptly announced they already knew what I had to say, and therefore did not need to attend my sessions. After discussions with the Director of Information and Broadcasting and the TV station managers, it was decided I should concentrate on preproduction training and give basic technical and camera technique training to cameramen and technicians. Classes for producers included program planning, selecting appropriate production locations, choosing performers, writing program and story outlines, and solving production problems.

Other staff members were to receive instructions on appropriate technical topics such as camera lenses, angles, and movement, and basic rules of composition. I also tried to encourage better shooting habits, such as using a tripod and specialized microphones.

Production Constraints

Producing good programming in the Maldives is a challenging task. It is difficult to find rooms large enough for production purposes. Filming out-of-doors in the capital city (where most local productions are made) is always a challenge because of the high noise level. Outdoor filming quality also suffers from the glare created by the sun and white sand. Another problem is finding Maldivians, trained or untrained, who are comfortable in front of the camera, as most islanders are very camera shy.

My major frustration was not being able to discuss program content; this was not part of my mandate. It is very difficult to upgrade overall production skills without considering program content. I eventually was able to discuss the subject informally once I had established a good rapport with my Maldivian superiors.

Besides the formal classes, I ran informal one-on-one sessions with some of the staff members. Together, we analyzed their work and discussed how to solve their particular problems. I believe this is a critical part of training, but it works only with those who are personally motivated and willing to bring in their material for examination.

could speak to the President of the Maldives about some of the observations I had made and of how to best upgrade their broadcasting capability. He took a personal interest in the TV station and encouraged constructive changes. He welcomed suggestions that there be more development-oriented material on TV, and that the station carry more educational programming. He also felt that while it is the role of TV to deliver government messages to the citizens, it could also serve as a channel for citizens to send messages to the government.

While I was there, a number of changes I recommended were enacted, including the hiring of three new producers. One of those was the first woman employed in any capacity at the station. Program changes were also discussed. These included efforts to get the station to carry more local cultural, educational, and entertainment programming. The President's Office also prepared a position paper on the role that the TV station should play in encouraging a more effective use of the medium.

The Rewards

It was particularly rewarding watching eager students improve significantly during the training period. Trainers and trainees alike feel rewarded when results of their efforts are immediately apparent. All too often, video courses consist of only technical skills training. There is great value in teaching substantive production skills so that not only is the camera in focus, but the content is meaningful as well. For this reason, identifying the audience and learning how to tell a story in a visually entertaining way must also be part of training. These skills will translate into better use of video, whether it is for delivery of national news, a development message, a formal educational program, or for entertainment shows. ■

Doc Mayer is a video consultant who appreciates a challenge whether it is in the United States in a developing country.

Microcomputers in Development Workshop

Stanford University's Food Research Institute is conducting a workshop on Microcomputers in Development for people without previous microcomputer experience who wish to gain a broad overview of the technology, and to develop skills in the use of selected commercial software packages. A combination of "hands-on" sessions and presentations of case studies on microcomputer applications will give participants working knowledge of the latest computer software and hardware, and insight into problems of project appraisal and project management.

The four-week session costs US\$2750; housing and meals are not included but can be provided upon request. The workshop is limited to 30 participants. Native French and Spanish speakers will be on the instruction team. Registration ends June 30, 1986. For information contact Carl H. Gotsch, Food Research Institute, Stanford University, Stanford, California 94305, USA.

A Communicator's Checklist

1 Television for Development: The African Experience by Iain McLellan (Ottawa: International Development Research Centre, 1986) 156pp.

Television has been called the "jewel of a tired and spent bourgeoisie," — a statement that could apply to Africa as well as the Western world, and reflects some of the findings in a recent report from the International Development Research Centre (Canada), entitled *Television for Development: The African Experience*. Its author, journalist Iain McLellan, notes that nearly every country in Africa has television broadcasting facilities and trained technicians, producers, and directors. But, in many African countries much of the television budget is spent on the facilities, and not much is left for program planning.

In this 157-page report, the author discusses the education and development role of television in Africa 25 years after its introduction. McLellan provides constructive criticism and suggests ways television can be improved and better serve the African societies. The research is based on interviews in 14 countries with media professionals, government officials, development workers in the field, international development organizations, and nongovernment organizations involved in development support communications. Issues addressed include the potential of television to support development, why this potential has not been realized, what might be required to fulfill this potential, and what the likelihood is that those changes might occur.

Producers, government officials, viewers, educators, field workers, and aid donors agree on their dissatisfaction with television's evolution. Most African countries have adopted the same approach to TV as North Americans and Europeans but do not have the resources, infrastructure, or training to follow it through, according to McLellan. TV producers in Africa rarely venture out of capital cities to mix with, understand, or assist rural people in communicating with each other or with those who are trying to help them. African television imports or mimics Western programs; it diverts or entertains rather than educates.

In McLellan's terms, the assessment of the potential of television in Africa was faulty from the start and the social, cultural, economic, and political restraints combined to limit its potential. Few governments encourage freedom of expression in media which would enable urban poor and rural populations to better understand themselves and articulate their needs. It is not easy to give citizenry the means to raise consciousness, explore various development options, and express their points of view. El Hadj Diouf, University of Dakar communications professor, points out the importance of considering the human dimension in rural development. There may be a great risk in keeping the population mute, ignoring their input, and making only cosmetic changes.

McLellan believes that television could justify its costs if used for development, but that would require integration and coordination with other development efforts. Decentralized, local television — as a development medium — is designed to activate the community it serves. Its horizontal structure facilitates exchange within and between communities. It is geared to local needs, customs, and languages. Combined with personal field contact, television and video provide enormous potential for allowing people to articulate their needs to leaders and policy-makers, and work together to solve their problems, perhaps with outside technical and financial assistance.

It might seem amateurish for ordinary people to make a video, resulting in an awkward and slow moving production at times, but this is acceptable if the goal is not the "seduction of the eye and ear, but the enlightenment of the eye, ear, and voice."

The future for development support television and video is seen by many to lie in broadcast signals that reach rural as well as urban areas via satellites, government purchased and maintained group-viewing televisions powered by solar energy, coordinated multimedia campaigns and local discussions, increased feedback and interaction between broadcaster and viewer, and decentralized or community broadcasting and videos in local languages.

McLellan found signs of encouragement during the three-month survey in Africa. The decentralization of the Nigerian Television Authority gives local stations the resources to produce for the national network as well as to generate their own local programming. In the Ivory Coast, nonformal educational television broadcasts are being coordinated with a network of field *animateurs*. Television sets are being relocated from schools, where they were used for formal education, to villages throughout the country. Niger operates solar-powered television sets for group viewing in a number of rural villages as well as in urban youth centers. Its Tele-Sahel's programming is geared to nonformal education with more video recording taking place on location in rural areas than in the Niamey studios.

The report is divided into three sections. The first concentrates on experiments and innovations with group viewing centers, solar-powered television sets, local discussions, and television used with other development communication media. The second section focuses on social dramas, video, and formative evaluation and research as a means to improve television's capacity as an educator. The last section points out beneficiaries — women, agriculture, and health — when African television supports development. ■

This report is available free from International Development Research Centre, P.O. Box 8500, Ottawa, Ontario, Canada K1G 3H9.

Reviewed by Diana Talbert, Vice President, Health and Education Resources.

2 The New Media: Communication, Research, and Technology, by Ronald E. Rice and Associates (Beverly Hills: Sage Publications, 1984) 408pp.

Ronald Rice and an impressive team of twelve associates have come up with an encyclopedic state-of-the-art reference book. From the title, which contains all the "right" words, to the comprehensive coverage in its twelve chapters, the book contains a collection of data, insights, case study descriptions, and predictions. The well-chosen chapter order first provides a brief history, some theory, and alternative research methods, which are then followed by sections on individual and group communication, organizational communication, and communicating within institutions.

The generous collection may offer more than the reader wants to know, but whatever current information is being sought will probably be found, whether it is videotex, microcomputers, television, teleconferencing, libraries, office automation, electronic mail, and a host of other media developments — all in a communication context. All topics are treated responsibly by competent and articulate authors. Rice provides the introductions and summaries which help to create a modicum of unity. His greater contributions come in the three chapters he wrote and the five chapters in which he appears as co-author.

The book has many audiences, but probably leans more toward individuals who are concerned about communication in the academic sense rather than practitioners who might be seeking guidance for selecting and using contemporary information technologies. This volume would be a good textbook for an introductory course which considers contemporary communication/information technologies. The fact that *The New Media* is in its second printing may indicate its popularity for such courses.

Readers of *DCR* might be disappointed not to find many references to the use of media and technology in the developing nations of the world. They will be pleased, however, to find descriptions of diffusion and implementation of innovative technology-based practices which are discussed in several chapters. The settings in which such innovations are presented are usually business or commercial environments rather than education and human services. One exception is Milton Chen's chapter, "Computers in the Lives of Our Children: Looking Back on a Generation of Television Research," in which the lessons learned from television research are held up and compared with the research questions about microcomputers.

There is a wealth of information in this volume. Most of the data and electronic developments will be outdated within five years, but many of the research agenda will probably remain. Let us hope some progress is made in that sector so that the use of these "new" media and technologies will bring about answers

to some of the most important problems we continue to face. ■

Available from SAGE Publications, Inc., 275 S. Beverly Drive, Beverly Hills, California 90212, USA for US\$28.00 hardback, US\$14.00 paper.

Reviewed by Donald P. Ely, Professor of Instructional Design, Development, and Evaluation and Director of the ERIC Clearinghouse on Information Resources at Syracuse University. He has recently served as a consultant at the Center for Communication Technology in Jakarta, Indonesia.

3 **Combatting Poverty Through Adult Education: National Development Strategies**, edited by Chris Duke. (Beckenham, Kent, England: Croom Helm Ltd., 1895) 253pp.

For better or worse, educators now believe that economists exercise great influence over budget allocation in the developing countries. That great influence has motivated educators to expend considerable energy in demonstrating the economic viability of the educational enterprise. Primary school has recently been shown in a number of studies to have a high return, both to children who complete the elementary years and to the society into which they are delivered as productive participants. Secondary and tertiary education have fared less well: they are clearly valuable to the relatively small numbers of students who succeed in completing their studies, but are very costly to the society which heavily subsidizes secondary schools and especially universities.

In this volume editor Chris Duke cites the "hope, maybe a naive expectation" that the seven chosen case studies would produce some proof that the money spent on adult education reduces poverty more than if the funds were spent in other sectors. The studies were chosen from a range of countries across the political spectrum and around the world. Six public and one privately sponsored programs are included. Cases examined are the Nicaragua Literacy Campaign, Chile's Educational Operative Units, MOBRAL in Brazil, Kenya's Adult Education Program, Seamaul Education in Korea, the Adult Education Program in Tamil Nadu, India and the well-known Sarvodaya Program in Sri Lanka.

Duke characterizes the aims and objectives of the program on two scales: political, from "cautiously reformist" to overtly revolutionary; and educational, from literacy plus "safe" functional skills to societal transformation.

All the programs studied had as one stated aim to reach the poorest of the poor in their country. Certainly, combating poverty is not likely to happen unless the program is accessible to those in need. Four of the seven programs were found to succeed in this aim: for a variety of reasons the programs in India, Korea and Chile did not. Why they failed is too complicated to tell in the space available.

What then was the impact of the remaining four programs on alleviating poverty? This book does not tell us. While the authors have made valiant efforts to specify costs of the programs, they all agree that conventional economic measures cannot cope with the complexities of causality and quantification, so the case for supporting adult education as a means for reducing inequality and addressing pov-

erty "must be made on other grounds." Frankly, I am not certain what that statement means. Chris Duke is forced to the less than ringing conclusion that, given the right timing and well-chosen methods, adult education has a "significant contribution to make as part of a larger strategy."

My view for some time has been that adult education in fact can contribute directly to alleviation of poverty under a wide variety of overarching social and political systems. Two conditions seem necessary and sufficient to make this contribution both possible and measurable. First, *the program must be designed to address specific problems or constraints identified by members of the learning community*. A number of techniques used in the cases studied in this book have proven effective in helping community people identify problems and decide on how to attack them. The majority of these problems are related to questions of how to make money through self-employment—participants recognize that employment in an established firm is an unlikely product of adult education and training. (That perception was borne out by the MOBRAL study, which found that fewer than one person in fifty gained access to full-time employment after taking part in MOBRAL's programs.)

The second important factor for getting more money into people's hands following training is access to seed capital. For poor rural community-based groups, access to credit is difficult at best. Individuals have some access to informal credit through local money-lenders albeit usually at high interest rates. For groups who need to share the risk of a new venture growing out of a learning experience, however, there is often no source—and if the group is largely or wholly made up of women, credit is virtually impossible to obtain.

Gweneth Eng and Louis Woo have recently undertaken four case studies looking at pro-

"... the program must be designed to address specific problems or constraints identified by members of the learning community."

grams which closely linked training and credit. They looked at benefit-cost ratios in each of the programs, and found the following results. All returns to participants were positive. The lowest benefit-cost ratio, 1.14, was realized by a women's rural development project in Kenya—not because the women are not productive, but because they, alone among the four programs studied, could not spend full time putting their new skills to use. They continued to spend about twelve hours a day on their daily chores and used their spare time for money-making. Other returns to participants ranged from 2.37 in a rice growing program, 3.97 in a microenterprise development project, to a highly remunerative 12.47 in a Central American farmer education project.

I find the total absence of any reference to linking education with credit a most surprising mistake in a book focused on combating poverty. Or perhaps it is a mistake to be surprised: these worthy studies, and Chris Duke's summary of their findings, perhaps tell us something we in adult education are loath to admit: putting money in people's pockets is a fairly low priority of most large scale adult education programs. Persons enrolling in those programs should do so to become more informed citizens, to improve their literacy capabilities, to obtain formal school equivalence certificates—but if they need to improve their economic circumstances in the short run, they would do better to spend their time and effort elsewhere. ■

Available in the U.S. for US\$31.00 from Croom Helm Ltd., 51 Washington Street, Dover, New Hampshire 03820, USA, and in the U.K. for £17.95, from Croom Helm Ltd., Provident House, Burrell Row, Beckenham, Kent BR3 1AT, U.K.

Reviewed by James Hoxeng, an international educational specialist with the Agency for International Development. He has managed a number of adult education projects for AID.

4 **Rural Educational Broadcasting—A Philippine Experience**, by Felix Librero. (Laguna, Philippines: University of the Philippines at Los Baños, 1985) 155pp.

According to many philosophers, nobody can be *given* experience, but there is no doubt that the case study approach to learning can provide vicarious experience of real value. With this in mind, this little book by Felix Librero can be seen as a valuable asset to anyone who already is or who is planning to be a practitioner in the field of rural radio.

The book, as the author says in the forward, is "an effort to synthesize experiences in running a rural educational station at the University of the Philippines at Los Baños, as well as the experiences of other rural educational broadcasters in various provinces of the country during the last 25 years." It is, in fact, a case study of Radio DZLB, with explanations of its framework, its operational guidelines, and a detailed account of the DZLB School On-The-Air.

The Operational Guidelines and the information on "how to get started" could be of real value to anyone new in the profession, or for anyone seeking ways of improving an existing rural radio network. The author is honest enough to set down the failures as well as the successes of the station, and there is no doubt we learn as much, if not more, from the study of mistakes as we do from the study of the successes. Radio DZLB was indeed ambitious in its enterprises, running programs such as the 4-H Club, The Mother's Club, the Dairy Farmer's and Milkman's Hour, very successfully. The information on the workings of the farmer's forum, with its opportunities for farmers to share news, concerns, and tips is very encouraging, and could provide a good springboard for starting similar fora in other countries. The explanations of the failure of the Fisherman's Hour are equally enlightening and deserve careful study. One of the most

valuable observations in this case study is: "in planning the project, we underestimated our target audience. A lot of the pond operators were professionals and were not interested in mass production." Moreover, it was found that "the fishpen and fishpond operators did not believe that a radio program could help increase their production." Both these realizations point to what is possibly the most logical starting point for all radio programming — understanding the audience — both their professional knowledge of the subject and their appreciation of program formats and approaches. The DZLB Fisherman's Hour was by no means the only radio program to have gone under because of a failure to spend time in adequately assessing its audience.

The chapter on the School On-The-Air is very detailed and helpful. It explains just what a School On-The-Air is: "A specially designed radio program where the subject matter is presented systematically and in a progressive manner with the ultimate goal of achieving desired results under a teaching-learning situation." And then it details the characteristics of such a school; explains how to establish a school (including details of personnel needs, management schemes, and feedback mechanisms); gives program suggestions and information on enrollment, examinations, and graduation. It also provides audience survey instruments and a School On-The-Air program schedule. In short, everything needed to provide a sound basis on which to explore the possibilities of such a school in another place.

The last part of the book is devoted to a chapter on "Looking Ahead." The author prophesies that the future of educational radio lies in more interactive programming; more education-oriented entertainment programming; and more personalized and localized presentations — all prophesies that would be readily endorsed by those of us working in educational radio in other parts of the world.

The book is complete with a good bibliography and some helpful appendices, containing outlines for training programs and evaluation papers. The major weakness of the book has nothing to do with its contents or its authorship; it has to do with its publication. The book has been bound so poorly that the minute one attempts to open it, all the pages fall out. It would seem like a good idea to punch holes in the spine of the book and insert strong ring binders before attempting to use it at all, otherwise the aggravation of coping with falling pages might just dissuade you from continuing your reading of this very helpful book.

Available free from Felix Librero, Chairman, Dept. of Development Communication, University of the Philippines at Los Baños, College, Laguna, Philippines. For orders outside the Philippines, please include US\$5.00 for handling and postage.

Reviewed by Esta de Fossard, a Senior Communications Officer at the Academy for Educational Development. She is currently Project Administrator for the Academy's Development Communications Project in Swaziland.

On File at ERIC

by Barbara Minor

Documents recently entered in the ERIC (Educational Resources Information Center) files include a bibliography on mass media systems in educational development, a report on the methodology developed for the Radio Language Arts Project in Kenya, an analysis of development communication during the 1970s, a handbook for making films, and a packet of audiovisual instruction materials. All of these documents are available in microfiche, and all but one in paper copy, from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22304, U.S.A. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping costs may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.

● Sanchez, James and Romero, Patricia, compilers. *Mass Media Systems (Television, Radio, and Satellite) for LDC Regional Educational Development: The Case of Africa and the Middle East. Bibliography 22.* 1985, 1-pp. (ED260 864).

Intended as an introduction to the use of educational media in developing countries, this bibliography provides an overview of materials available in government documents collections. Although the 33 documents listed are derived principally from the Agency for International Development (AID), two documents from the Educational Resources Information Center (ERIC) are also included. Each entry indicates a source for obtaining the document and includes an annotation. Dates of publications for the references range from 1972 to 1985, with most falling in the mid-1970s. Abbreviations used in document titles and annotations are defined, and an index provides an alphabetized listing of topics and areas of concern. Available from EDRS in microfiche only for 75 cents.

● Edgerton, David and Sedlak, Philip A. *A Look at Methodology. Radio Language Arts Project Implementation. Field Notes 5.* 1984, 8pp. (ED 258 478).

The methodology described was developed for use in a U.S.-sponsored radio-based English language arts program for grades one through three in Kenya. Adapted to the special circumstances of the medium, the context, and the program's administrative limitations, the highly interactive radio lessons adhere to distributed-learning principles in instructional design and use in a practical and relevant curriculum to organize the elements of instruction. The Radio Language Arts Program series of lessons uses direct-method language teaching principles and postlesson audio exercises when appropriate and where the limitations of instructional broadcasting justify their use. Available from EDRS in microfiche for 75 cents or in paper copy for \$1.80.

● Stevenson, Robert L. *Third World Communication Development in the 1970s.* 1985, 26pp. (ED261 438).

Quantitative data on various indexes of national development — mass media, "horizontal communication" (mail, telephones, and telegrams), democracy, social growth, literacy, and urbanization — were collected and estimated for more than 100 developing countries for roughly the decade between 1970 and 1980. These data were then used to test various theories and definitions of communication development. The analyses revealed that in all geographic regions, broadcasting showed spectacular growth, while print media grew only modestly. Horizontal communication, social growth, literacy, and urbanization showed some growth, while democracy — defined in Western terms as civil and political liberties — did not fare well in developing countries. Analysis of the data showed little support either for the original dominant paradigm of communication development that mass media could spur economic and political development, or for alternative theories that emphasize horizontal communication and social development. Available from EDRS in microfiche for 75 cents or in paper for \$3.60.

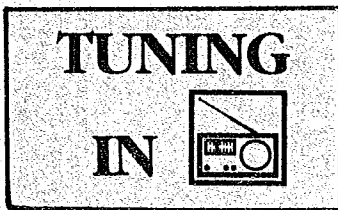
● Beuthner, Reginald and others, compilers. *Film Handbook: Communication Manual. Second Edition.* 1983, 390pp (ED256 295).

Each chapter in this book is a self-contained unit about specific aspects of film-making designed to accompany film courses being offered by the University of the West Indies, the Jamaica Broadcasting Corporation, and the Institute of Mass Communication in conjunction with a German sponsor, Friedrich-Ebert. The following topics are addressed: the Jamaican film; perception; organization and setting up; scripts; light; filmstock; cameras; lenses; filters; uses of lights; the exposure meter; camera work; continuity of time, place, and action; the laboratory; functions of sound; sound recording; sound editing problems; and editing procedure. Available from EDRS in microfiche for 75 cents or in paper for \$28.80.

● *Audio-Visual/Communications Teaching Aids Packet. Supplementary Materials. Packet P-8.* 1982, 94pp. (ED257 435).

This packet contains three handouts on training theory and the use of audiovisual aids, as well as a section on materials and presentation techniques for use by community development workers. The first handout briefly discusses the four steps in the communication process and presents a seven-step procedure for improving communications; the second describes and pictorially represents the major categories of media; and the third addresses four questions that should be considered in designing and planning effective communications. The final section provides instructions for making and using bamboo or reed writing pens, brushes, crayons, pocket charts, puppets, flannel boards and flipcharts, exhibits and bulletin boards, a flashlight slide projector and filmstrip adaptor, and radio. Available from EDRS in microfiche for 75 cents or in paper for \$7.20.

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Colombia Could Have the Biggest School in the World

by Jorge Humberto Jiménez

Colombia hopes to reach more than 20 million potential students with nonconventional education services. This figure represents the portion of the population that is not served by the formal education system — a system unable to keep pace with the rapid growth of the population it must serve.

What would it cost the formal education system in personnel, infrastructure, and supplies to serve not just the seven million people currently reached, but the 28 million who should be served? The calculations are astronomical; and, what is worse, these costs are impossible to cover. Another consideration is that these additional services could not be implemented quickly, even in a country where impossible things happen.

In response to these issues the Colombian government has formulated a policy that encourages implementation of strategies to complement the traditional system and permit marginal groups to receive the benefits of education. This program is known as CAMINA (a Spanish acronym meaning "walk"), and is being promoted under the theme of "Education for All Colombians." Its base and point of departure is to use existing educational resources and programs, in both private and public institutions, formal and nonformal sectors.

A School That Reaches Everyone

Based on the experience over several decades which the *Fundación Acción Cultural Popular (ACPO)* has acquired, as well as the educational work it has done through its Suta-tenza Radio Network, the national government decided to link the available transmission and production facilities of this radio network for maximum population coverage, offering a multiplicity of educational opportunities. Suta-tenza's 700 kilowatts, with transmitters in Bogotá, Cali, Medellín, Barranquilla, and Magangué, can provide a school within reach of everyone with access to a radio.

Secondary and higher institutions, private and public alike, have joined this effort. Having traditionally provided educational services to Colombians through their nonformal programs in cooperativism, ecology, family life, and through formal programs at the primary, secondary, or higher levels, they will now offer, via this network, their unique educational programming to meet the varied needs of this unserved population.

After one year of activities — relatively little time for a definitive evaluation of a new and complex experience — some observations and trends have been identified:

- The staffs of the 18 participating entities that are responsible for the production of

the radio programs look forward to continuing the project. They value the experience gained as radio communicators, the high visibility their institutions receive from the radio, and the letters and telephone calls that indicate acceptance by their audiences.

- Coordination among the institutions has been difficult but stimulating. The medium of radio provides them with an opportunity for exchange, self-criticism, mutual awareness, and team-building.
- The initiative taken by the National Ministry of Education coupled with ACPO's experience, has resulted in the extension of the network to more than 100 small radio stations which retransmit programs using audiocassette tapes prepared and distributed by CAMINA.
- Adequate and timely distribution of support print materials has been a problem. Although not required by all the programs that are broadcast, support material needs have been a financial and logistical burden in the early stages of the program.
- Project directors feel that more and better

promotion is required to catch the attention and enthusiasm of a larger number of potential users.

- Finally, it is not enough to simply prepare and broadcast good programs. Education, especially distance education, creates other complementary needs in users such as consultation by telephone, responses to letters, additional topical information provided to users, and support to local organizations that have been stimulated by this service.

Much has been said about the power of the media and its role in education. A multitude of academic questions arise from these discussions, all of them important. But there is also a practical question that needs to be answered: is there a way to quickly reach the millions of people in our cities and rural areas who have no access to educational opportunities? Colombia says "yes," and the answer is radio. Soon, twenty million people who are now deprived of education will have an opportunity to learn. ■

Jorge Humberto Jiménez is Director of National Programming, Suta-tenza Radio Network, Bogotá, Colombia.

CIESPAL Radio Contest Winners

In DCR 43, we announced a radio contest sponsored by the International Center of Higher Communication Studies for Latin America (CIESPAL) in collaboration with Radio Nederland, to select commendable Latin American educational radio programs. The contest winners were announced during CIESPAL's 25th anniversary festival held in Quito, Ecuador, October 15-20, 1984.

It was not until recently that we learned the results of this contest, and although considerable time has elapsed since the awards were announced, we would like to congratulate the winners, and commend the organizers of this contest for their continued support of educational radio in Latin America.

The contest drew a large pool of entrants, with almost 200 submissions from 15 countries competing in four categories — documentary, radio magazine, radio drama, and radio education.

First prize for a documentary went to:
"The Poor Taught Me to Read the Bible," by
Radio Santa María, Dominican Republic.

No first prize was awarded, but second prize

in the radio magazine category was awarded to:

"Opening the Way," by *El Centro Nacional de Acción Pastoral (CENAP)*, Costa Rica.

In radio drama also, there was no first prize winner. Second prize went to:

"The Legend of Sunday the Seventh," by
Radio La Voz de la Selva, Peru.

The first (and only) prize in the education category was awarded to the adult education courses of Ecuador's *Instituto Radiofónico Fe y Alegría*.

Over 450 participants joined in the anniversary activities, with representatives from Latin American and international broadcasting organizations including Radio Canada, Radio Switzerland, the Voice of Germany, Radio Sweden, and Radio Nederland. There were seminars on educational radio topics, tapes of radio programs from participating countries, and professional development exchanges. In part, the Festival represented the culmination of CIESPAL's efforts in the area of radio since 1982, but the week's activities also signified their commitment to continued improvement of radio programming in Latin America. ■

(A bibliography on these and related studies can be obtained from either the East-West Center or from ISNAR – see addresses at the end of this article.)

System Challenges

Although favorable climate and soils allow islanders to grow many crops, there has been little research available that can be applied to the islands' principal food crops. Mounting research to deal with all the important crops would require a huge investment.

Other factors challenge the systems. Many farmers have had little experience in applying other than traditional cropping practices or producing in a complex market economy. Land ownership is extremely complicated, and cultural factors affect motivation and communication. Education has only recently become widespread. While most people are literate, few can communicate well in languages used in agricultural and higher education institutions. Communication of all kinds is constrained by mountainous and tropical jungle terrain, and the great distance between islands. Of the mass media, only radio reaches beyond the main cities to more than a tiny fraction of the population involved in agriculture.

Despite these constraints, agriculture is still the leading economic activity; it is the main focus of development in most of these countries and for at least three-fourths of the people. National development plans stress agricultural development needs: to improve both quantity and quality of food; to reduce amounts of imported foods; and to increase the country's international trade credits through export of agricultural commodities.

All of these countries have similarly structured agriculture ministries, although each has its unique characteristics. The basic unit is a national ministry or department of agriculture, which typically has a politically appointed minister and a civil service-type administrative structure. In addition, most ministries also provide research, extension, and agricultural education services. A communication or information unit is located in this ministry as well.

Knowledge Systems Communications

We have studied and worked with these island systems in a broad context of communication, including (1) linking the island system to external knowledge sources and to the political and production systems of the nation it serves; (2) linking units within the system; and (3) linking users of agricultural knowledge – producers, input suppliers, marketers, planners, etc. – to each other. Our studies have gone well beyond media use, dealing with other means of communication, such as formal and informal training, person-to-person, group, organizational and interorganizational communication, and extension methods.

From our work in the region, we have seen programs and activities that are building bridges and stimulating agricultural communication. Many of the developments have been fostered by creative and informed individuals or units without major increases in resources: resources that are limited, to be sure. Informa-

tion staffs are small and they have limited professional training (only one person in these three countries has degree qualifications in communications).

External Communication Connections

Island people have limited contacts with the fast-changing socioeconomic milieu of the westernized and northern nations. Many island producers have had some exposure to modern agricultural ideas from islanders returning from advanced studies and training abroad; however, these contacts have not been extensively exploited. We found few cases where communication networks were created between these trained people; not much was apparently done to try to maintain continuing access to such knowledge. In the few technical libraries that exist, literature collections tend to be fragmentary, incomplete, often years behind current agricultural thinking, and language-bound to the original publication.

There are stirrings of change in the region. In more and more of the now-independent nations, international donors have helped establish elements within knowledge institutions. There are now two island-based universities that offer Bachelor of Science and Master of Science degree training in agriculture: The University of Technology at Lae, Papua New Guinea and the School of Agriculture of the University of the South Pacific (USP). The USP library, whose main campus is in Suva, Fiji, directs a major effort to collect literature (cultural, economic, social, and technical) of the Pacific Islands. Under grant funding from Canadian and United States sources, this program is also training librarians for each of the participating nations – expertise that has been in short supply.

The agricultural library at USP, which is located on the Alafua Campus of the School of Agriculture in Western Samoa, serves the student population and borrowers throughout the region through loan circulation.

The Institute for Research, Extension and Teaching in Agriculture (IRETA), created by the 11-member nations of USP also located at Alafua, serves the region in several ways, and is supported in part by grant funding from the U.S. Agency for International Development, and technical assistance from the University of Hawaii and Cornell University. IRETA has built special facilities on the Alafua campus, where it sponsors regional workshops and conferences, sharing regional expertise and bringing in specialists to teach and interact with national representatives. It also supports networking through electronic mail messaging and two-way voice contact via satellite and ground stations in member countries. (The latter effort was interrupted when the existing satellite ceased functioning, but will be resumed when another becomes available.)

One of IRETA's most innovative contributions has been its Agricultural Liaison Officer (ALO) network which is designed to increase the flow of knowledge among the participating national systems, and to make known to the leaders at the Alafua campus the needs of national agricultural systems.

By 1985, seven of the member nations had appointed an ALO representative to serve as his or her country's eyes and ears to enhance

the flow of agricultural information. It is the ALO's responsibility to keep in touch with current local research, to seek out earlier, perhaps neglected reports, and to review international data sources. They report their information to national officers and contribute to a quarterly newsletter that circulates among the 11 member countries.

Communication within Systems

Over the past four years Fiji, Tonga, and Western Samoa have begun to build better bridges between their in-country knowledge system units. In some cases, contact with donor organizations has stimulated better communication; other bridges are indigenous adaptations of ideas from elsewhere.

Both Fiji and Western Samoa have recently developed national research plans, working with ISNAR in the planning process. These plans have helped form communication links with extension leaders, with policy makers, and with other elements of the agricultural knowledge systems.

In-service training efforts in the three countries had been limited and fragmentary. All have shown impressive changes in recent years, helping to improve links between research centers, extension services, and producers. In Fiji, for example, responsibility for in-service training and information services has been vested in one officer. This has led to greater awareness by information staff of the programs and technical content dealt with in the action agencies, which has helped these writers and broadcasters to identify and to get to know information sources. At the same time, elements of communication philosophy and methods appear in more and more technical training programs.

For several years, Tongan in-service trainers have been required to provide advance copies of their training materials. In addition to their use in training, the materials fill needs as references for field officers. In Tonga, research and extension officers often train together, taking turns serving as trainer and trainee.

As Western Samoa has adapted the Training and Visit (T&V) system (see *DCR #22*) to its situation, increased attention to in-service training builds bridges between extension and other agricultural groups.

One notable factor encouraging change is the growing awareness among extension, research, and other institutional administrators of the need for communication support. Despite budget constraints, some have supported efforts to improve information staff competence, methods, and equipment. In Fiji, at least one information staff member has been approved for degree-training abroad. Western Samoa is developing increased technical assistance and upgrading equipment with Asian Development Bank and Food and Agricultural Organization backing.

Communicating to Producers

Efforts to get information out to producers is paying off as well. Field days, farm trials, and demonstrations (three typical activities that introduce new and improved agricultural techniques) have attracted more producers than ever in some of these countries. For example, Western Samoa recently held an Agricultural

Briefly Noted

by Robert Vittel and William Amt

• *Guidelines for Planning Communication Support for Rural Development Campaigns* is a manual published by the UNDP Asia & Pacific Programmes for Development Training and Communication Planning (UNDP/DTCP) and compiled by Najib M. Assif and James H. French. The manual covers the main components of planning communication support for rural development campaigns, how to carry out precampaign studies, how to design a communication strategy, and how to develop a management plan. Each section is supplemented by overhead transparencies (in the trainer's version), reference sheets, and worksheets. Available in English only, the trainee's version (which may be used for self-instruction) is available for US\$8.00, and the trainer's version costs US\$50.00; however, UNDP/DTCP will include five single copies of other publications free of charge with this order. Write: UNDP/DTCP, P.O. Box 2-147, 19 Phra Atit Road, Bangkok 10200, Thailand.

• The Industrial Information Section of the United Nations Industrial Development Organization Technology Programme has prepared a trilingual (English, French, and Spanish) *Directory of Industrial Information Services and Systems in Developing Countries*. This directory of 345 industrial and technological information facilities is designed to serve as a catalyst for increased networking activity among those institutions at the national, regional, and international levels concerned with accelerating the process of industrialization. Each entry includes the name of the organization, the address, languages used, a description of activities, topics about which information is provided, and a publications list. Free copies are available from the United Nations Industrial Development Organization, Industrial Information Section, P.O. Box 300, A-1400 Vienna, Austria.

• The sociology and political economy of mass media and interpersonal communication are central issues in *Communication and Social Change*, a new book by Michael Kunczik. Kunczik looks at development and communication from various viewpoints, concluding that there is a need for a "free media system within a nation state and a free flow of news on the international level." He raises many questions by outlining the major economic development and social change paradigms; showing how mass media have affected such change for good; and the position of developing countries in the international flow of news. Available in English from the Friedrich-Ebert-Stiftung, Godesberger Allee 149, D-5300 Bonn 2, Federal Republic of Germany.

• INTERPAKS, the International Program for Agricultural Knowledge Systems, is a program which provides educational and technical assistance in support of agricultural development through improved transfer and use of knowledge in developing countries. One of INTERPAKS' main functions is to provide information about agricultural knowledge systems

ongoing series of booklets. *INTERPAKS Interchange*, a quarterly newsletter examines methods of agricultural information dissemination in developing countries with feature articles, synopses of reports, speeches, book reviews, and INTERPAKS project activity news.

The INTERPAKS ongoing series of booklets include: 1) *The Cooperative Extension Service: An Adaptable Model for Developing Countries*, which examines how the U.S. university land-grant extension system has effectively combined both the research and extension functions of agricultural development, and how components of this system can be applied to developing countries; 2) *The Role of the Information Specialist in the Dissemination of Agricultural Information* looks at the uniqueness of this field, the different levels of information which are dealt with, i.e. the scientific, the extension, and the trade levels, and skills and education required of agricultural information specialists; and 3) *Problems Facing National Agricultural Extension in Developing Countries* discusses the results of 59 developing country agriculture extension directors who responded to an INTERPAKS questionnaire. The survey attempts to reveal problem areas in developing country agriculture extension systems and concludes with recommendations for improvements.

• Other useful INTERPAKS publications include: *Development Communications in the Third World*, a collection of the papers that were presented at the "Midwest Regional Symposium on Development Communications in the Third World" at the University of Illinois at Urbana-Champaign on April 15, 1983. Emile McNany delivered the keynote address which was followed with presentations by several other development communication specialists. *Annotated Bibliography on Development and Transfer of Technology, Vol. 1*, contains 271 relevant citations and annotations of literature in five areas: general agricultural development, policy and planning, technology development, technology transfer, and technology utilization, followed by an author and title index.

Single copies of the above-mentioned publications are available from: INTERPAKS, Office of International Agriculture, University of Illinois, 113 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801, USA. ■

The authors are on the Clearinghouse staff.

Call for Abstracts

The World Federation of Public Health Association will hold its Fifth International Congress in Mexico City March 22-17, 1987. The conference theme is *International Health in an Era of Economic Constraint: The Challenge*. Abstracts of proposed papers should be submitted by October 15, 1986 in English or Spanish. Request abstract forms and guidelines from: WFPHIA Secretariat, c/o American Public Health Association, 1015 15th Street, N.W., Washington, D.C. 20005, USA; or Dr. Jose Luis Luna, General Secretary, Local Coordinating Committee, Mexican Society for Public Health, Insurgentes Sur 1397, 6° piso, Col. Insurgentes, Mixcoac, Delegation B. Juarez, 03920 Mexico D.F., Mexico.

people attended the activities—nearly one quarter of that island's total population. A coordinated multimedia campaign helped boost attendance and offered follow-up printed materials to reinforce the messages delivered at the educational sessions. Both Fiji and Tonga make extensive use of field days to reach farmers. Their staffs are trained in how to plan and execute these three activities to improve their outreach effectiveness.

The modified T&V system developing in Western Samoa strengthens their outreach effort. Greater number, frequency, and continuity of visits by extension officers are building more and stronger links with farm producers. Similar emphasis on farmer contacts by extension in Fiji and Tonga strengthens the dissemination of agricultural information. Fiji is rapidly upgrading dissemination efforts, especially with publications. One new series provides reference materials for field extension staff, and another is devoted mainly to reporting new findings and recommendations from research to extension. Within the last year, an information officer has been assigned full-time to work with the Research Division to speed the flow of new information to users. Coordination between staffs of Fiji's broadcast and print news media assures dissemination in both media of information produced by the work of one information specialist.

Need for Communications Training

Training in communication practices and principles continues to be a scarce item on the educational agenda in the South Pacific. A relative vacuum for development communication specialists has existed because nearby training has not been available. The nearest degree-based training or intern programs are in Australia, New Zealand, or the Philippines. Fortunately on this point, IRETA appears to be maturing as a source of support by offering some agricultural communication courses. Meanwhile, Agricultural Liaison Officers are demonstrating that important contributions can be made by professionals who have both agriculture and communication training.

These and similar steps have helped to improve communication within the agricultural knowledge systems of this region over the past three years. They have been a motivating stimulus for still larger and more creative steps toward overcoming multiple constraints that persist. ■

For a bibliography of related studies, write either to: George Beal, Institute of Culture and Communication, East-West Center, 1777 East-West Road, Honolulu, Hawaii 96848, USA; or to International Service for National Agricultural Research, P.O. Box 93375-2509 AJ, The Hague, Netherlands.

George M. Beal recently retired as Research Associate, Institute of Culture and Communication, East-West Center, in Honolulu. He was for many years a researcher, teacher, and head of Sociology at Iowa State University, Ames, Iowa.

K. Robert Kern is a private consultant in agricultural communications. He was formerly communications officer, International Service for National Agricultural Research in The Hague, and many years head of extension communications at Iowa State University.

Continuing Education Centers: A Tanzanian Example

by David Giltrow



Continuing education centers (CECs) are neither new nor particularly glamorous stars on the development scene. They serve as catalysts to improve long term development efforts and provide the framework for linking ideas and people—a basic objective of development support communication (DSC).

The most familiar type of CEC found in developing nations are the farmer training centers. More recently, universities are establishing CECs to serve the wider community, especially at middle and higher manpower levels. This article offers suggestions on how universities can plan a continuing education center with an emphasis on DSC principles.

A typical university-based CEC develops a wide range of activities, including distance education services and training workshops, seminars, short courses, meetings of professional associations, and national and international conferences that will require housing and dining facilities.

Many developing country universities already conduct these activities, but usually on a between-term or ad hoc basis. More impact can be gained by creating a CEC that can properly organize and conduct outreach activities throughout the year. With this arrangement, the staff, meeting rooms, and residential facilities are dedicated to continuing education programs and are not at the mercy of ongoing academic timetables. Similarly, a well-equipped audiovisual unit becomes a necessity for the comprehensive CEC to meet the varied demands of its programs.

The observations below are based on the evolution of the Centre for Continuing Education at Sokoine University of Agriculture in Morogoro, Tanzania, which received US Agency for International Development (AID) assistance from 1980 to 1984 as part of a larger agricultural education and extension project. After five years of successful operation, some of the lessons learned might be useful.

The Sokoine Centre is physically divided into three units: a main meeting building, an office block, and a hostel complex, integrated into the university campus and with the usual student activities and services. But Sokoine has developed a pattern characteristic of many continuing education centers: it has become a campus within a campus. One link between the two is the Centre's Audiovisual Unit whose media equipment and production facilities also serves ongoing university media technology needs.

Lessons Learned

Lessons we learned in creating and operating the Sokoine Centre were in the areas of planning decisions, staffing, physical facilities, funding base, and programs and philosophy.

Planning Decisions:

Develop a cooperative alliance between donor and expected users. Participation by the

expected major users and any donor agencies must be promoted early in the planning process. If the university chooses not to involve key decision makers and identified users, the effort probably will not reflect the actual needs of such a center.

Provide flexibility and freedom from departmental politics by placing the CEC in a suitable location within the institution's organizational structure. If possible, the CEC should have independent standing similar to a library or an institute.

Further planning recommendations:

- Study existing continuing education centers in the country to determine the needs that are to be met by this CEC to avoid legitimate objections to duplication of effort.
- Solicit donor support. This is particularly important initially to purchase audiovisual and other imported equipment, and provide special staff training.

Staffing:

Select the right director. He or she should have strong academic credentials as well as a solid background in extension, continuing education, and administration.

- CEC staff should be highly professional, with knowledge of DSC principles and with a strong service commitment. They should be encouraged to participate in CEC management operations.
- A title, such as "educational specialist," should be established for these professionals.
- Training and development plans should include all professional and support staff including audiovisual technicians, hostel and dining room staff, and others.

Physical Facilities:

If new buildings are necessary, visit other facilities prior to making the architectural specifications. Second to staff quality, the physical facilities are the most critical element in the long term success of a CEC. Remind fiscal officials that the CEC will charge daily rates per person to cover meeting, living, and dining amenities appropriate for professionals and senior civil servants.

Take nothing for granted in developing the specifications for facilities and services. CECs require special physical surroundings that few architects or bureaucrats appreciate. The quality of the facilities needed by CEC clientel is something that may be overlooked by architects who are more experienced at designing boarding high schools on small budgets.

Design for media use. A high quality media center with a trained staff is a necessity for a national continuing education center—not a luxury. There are several reasons for suggesting this apparent extravagance.

1. The seminars, short courses, and workshops should demonstrate media use with hands-on activities to encourage understanding of development communication support.
2. Speakers and participants at international seminars will use slides, overhead projec-

tors, films, or possibly video in their presentations.

3. CEC training materials might be produced at the center for other training centers, schools, or for correspondence courses.

Funding Base:

A flexible, fair funding strategy, should be developed so as not to strain existing university finances. The university can support the CEC by absorbing staff salaries, utilities, and other basic budget items. Otherwise, the CEC should be a self-supporting unit and charge for all other CEC activities and services.

There should not be a blanket subsidization of program activities by donor agencies. Because of budgetary constraints, no provision was made by AID to support Sokoine continuing education programs. Nevertheless, the staff discovered many groups—private industry, ministries, development projects, and other donor agencies—with funds available for short term staff training at the Centre. This avoided the usual financial jolt that often occurs when a foreign aid project comes to an end.

Programs and Philosophy:

The CEC should have a primary program focus. Although it may seem economically smart to use a CEC as a general convention center where other groups can schedule their meetings and programs when there are open dates on the CEC calendar, this practice may alienate primary users who find they cannot schedule their activities at appropriate times.

A liaison from the client group should be assigned to work with the center's program specialists during the planning stage of an event. This type of cooperation exposes all clients to good communication and training techniques, and serves as an example of how communication support can bring greater depth to their activities.

An Advisory Committee of primary users should be established. This will help keep the CEC responsive to users' needs. The committee also gives the director a forum in which to develop CEC policy and to solicit help in solving various problems that arise at the facility.

A Summary

A successful continuing education center is a blend of good facilities, service-oriented staff, active program planning, sound financial policies, and professional marketing of services. If the setting is a university campus, intellectual resources usually available only to its students can benefit the wider community through CEC programs. Entwined with these elements is a strong communication support dimension that can serve as a model for users when they return to their home institutions.

David Giltrow was Team Leader for the Tanzania Agricultural Education and Extension Project, and coordinated upgrading of the Sokoine Centre Audiovisual Unit. He is now a private consultant in development communication and education.



Transcending Barriers: SHARING Satellite Technology

by Gail Bouck

In many areas of the world, particularly in developing countries, natural geographic barriers, lack of teachers, diffused populations, and inadequate infrastructures make conventional communication methods either physically or financially impossible. The expanding use of telecommunications, especially new satellite technology, can help overcome such difficulties. Although the use of such technology is likely to be affected by a country's political and economic situation, projects using telecommunications are, nonetheless, being carried out in education, medicine, and agriculture.

Under the auspices of INTELSAT, the 110-member organization which owns the world's international telecommunication satellite system, and in conjunction with the International Institute of Communications, a London-based member organization concerned with the uses and developments of international communication, Project SHARE (Satellites for Health And Rural Education) was initiated in order to make more people aware of the practical uses of satellite communications for educational and health purposes. Since its inception in 1985, it has provided free satellite access for rural health and long-distance educational programs which use new satellite technologies.

Each SHARE project involves a series of tests and/or demonstrations aimed at showing how modern telecommunications can help alleviate the problems inherent in providing rural health care and education. Originally conceived as a 16-month project, scheduled to end in April 1986, it has now been extended through December 1986. To facilitate the development of permanent long-term programs, extensive evaluations and studies will be conducted on each project, as well as on the project as a whole. These will be published and made available upon request to individuals and institutions in the field. (See address at end of article.)

To date, most projects have been affiliated with universities, professional societies, or hospitals, working with the various telecommunication entities in the countries involved. Each sponsor designs and dictates the content of the project and is responsible for securing financial support, whether private or governmental, and for the terrestrial links. Once the project application has been submitted to INTELSAT, it is reviewed by the International Advisory Council—a special panel of experts in international communications from around the world. The review determines if the proj-

ect fits the image and spirit of Project SHARE, its potential long-term benefits, and the overall feasibility of the proposal.

Exemplary Projects

Thirty-seven different countries are currently participating in Project SHARE. In education, the People's Republic of China uses satellites to transmit daily lectures to university students throughout the country. Called "A TV University," it serves as an example of how standardized education levels can be brought to scattered populations in countries where great distances and geographical barriers make contact difficult. The use of satellites has also been successfully demonstrated for years by both the University of the South Pacific and the University of the West Indies where a high percentage of course completions, along with high test scores, have been achieved. (See *DCR* 24 and 26.)

(Continued on page 3)

Where in the World are Radios?

by Graham Mytton

Accurate and reliable data on radio ownership in rural areas of developing countries are notoriously difficult to obtain. On the other hand, we know quite a lot about access to and ownership of radios and televisions in urban areas of these same countries, primarily because this is where the bulk of manufactured consumer goods are sold. Those who purchase advertisement space or time want to know what consumers are buying: how many people in Lagos, Nigeria can be reached by a series of 30-second radio commercials for toilet soap or how many people in Jakarta, Indonesia have television sets, and how many watch it at home? Advertisers need this information. In contrast, there is little demand for information about rural consumers in developing countries, so not much is known about them.

Although commercial research agencies do exist in many developing countries, consumer research is not their only, or even their major activity; they do many other types of research as well. What about research by broadcasting

organizations? In Latin America, commercial radio stations commission audience surveys, but these too concentrate on urban audiences. In Asia, audience research is carried out with growing frequency only in Sri Lanka, India, and Pakistan. In sub-Saharan Africa, the picture is even less clear. Other than in South Africa, no radio or TV stations do regular audience research. In North Africa, only Morocco, Tunisia, and Egypt have done systematic research and these have been mainly urban-based studies of their audiences.

(Continued on page 2)

DCR INDEX INSIDE

The four center pages of this issue contain the first comprehensive subject index of *DCR* issues 40 through 54, encompassing the dates of December 1982 to August 1986. We hope it is a useful guide to our work.



Development Communication Report

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Development Communication Report, published quarterly by the Clearinghouse on Development Communication, has a circulation of over 6,000. The newsletter is available free of charge to readers in the developing world, and at a charge of US\$10.00 per year to readers in the industrialized countries.

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Academy for Educational Development, a nonprofit planning organization, and supported by the U.S. Agency for International Development, Bureau for Science and Technology, Office of Education, as part of its program in educational technology and development communication.

The views expressed in *Development Communication Report* are those of the authors and not necessarily those of its sponsors. Original material in the *Report* may be reproduced without prior permission provided that full credit is given and that two copies of the reprint are sent to the Editor.

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(Mytton continued from page 1)

BBC's Survey Findings

This lengthy introduction serves to suggest some caution when interpreting the following facts and figures. Since 1944, the BBC has applied the sample survey methodology to gather audience data, interviewing randomly selected people in designated areas of a particular country. Their External Services Division performs regular audience research in countries around the world in order to collect accurate information about radio ownership and to determine who listens to the BBC and other international broadcasters.

In recent years, increased attention has been given, whenever possible, to rural areas. These studies verify the already-assumed high levels of exposure to the media in urban areas and the generally lower listening levels in rural areas. Nonetheless, increased radio ownership among rural people in developing countries has been confirmed by these surveys.

Given the expense and difficulty of research in developing countries, it is understandable that the information we have is both meager and incomplete. In 1964, for example, a survey in the West African country of Togo, showed 44 percent radio ownership in urban areas, but rural surveys indicated only four to five percent ownership. No more recent data are available. Elsewhere in West Africa, figures are somewhat more current. In neighboring Ghana, an extensive survey in 1977 showed that 72 percent of urban households had radios, with 46 percent ownership in the rural areas. In Nigeria, Africa's most populous country, a 1983 national survey showed 85 percent ownership or access to radios in urban households and an impressive 62 percent were found in rural households.

In eastern African countries, surveys have occurred more regularly, making it possible to show change over time within a country. In Tanzania, for example, a nationwide audience survey in 1960 indicated that 10 percent of urban households had radios, but fewer than two percent of rural homes had radios at that time. By 1967, the situation had been transformed. In the capital city, Dar es Salaam, ownership had grown to 58 percent. Another survey in 1974 showed that among the 14 million people in the country, there were 1.7 million radios with nearly 1.6 million of these located in rural areas. At that time, it was one of the highest levels of recorded radio ownership in the developing world.

Less spectacular, but equally significant growth has occurred elsewhere. In Kenya, radio ownership grew from a very low base in 1960 to 72 percent of urban households and 36 percent of rural households with radios by 1978. Five years later, this figure had risen to 78 percent and 42 percent respectively.

Potential in China

In Asia, the picture has been broadly similar. In China, individual radio ownership was not encouraged during the cultural revolution, but since then it has rocketed. While there has not been a nationwide survey, recent estimates put ownership at over 100 million, perhaps five

times as many radios than in the years before the cultural revolution. At that time, the dominant equipment was the ubiquitous wired radio, delivering only local broadcast services. Since then, much of the growth has been in individual ownership of portable radios in rural China. Moreover, there remains enormous potential for even greater growth in radio ownership in a country of more than one billion people.

In India, where so much emphasis has been put on the developmental role of radio, in some rural areas a majority of people still do not have their own radios. Therefore, despite the fact that there is widespread community and group listening, there are still many who are not reached at all. The pattern is very similar to that in Africa—a high level of radio ownership in towns and a smaller but growing presence in the countryside. In a 1975 survey of eight Indian states, 75 percent of those interviewed in urban areas had a radio at home, while in rural areas, ownership came to only 38 percent.

Elsewhere in South Asia, one finds a similar picture. In 1975, a very limited survey done in accessible regions of rural Pakistan, showed that no more than 11 percent of households had radios. By 1982, the situation had been significantly transformed. Although a different sample of rural people was interviewed, it was clear that there had been substantial growth in ownership—more than half of those contacted had a radio.

At the present time, there are still many areas of the world where broadcast research is not possible. Afghanistan is a good example. The strategy used by BBC to assess Afghan radio-listening habits was to conduct a study of Afghan refugee camps in Pakistan, since the approximately three million refugees living there had come mainly from rural Afghanistan. In the survey, 75 percent had had radios.

We have less data for Latin America, but what exists shows a somewhat earlier expansion of radio into the homes of rural residents. Radio ownership seems now to have reached nearly saturation levels.

A Downturn Ahead?

Although the statistics seem to indicate that the trend is toward having a radio in every household throughout the world, this is not actually the case. There are signs that the growth documented in the above figures appears to have peaked. In fact, there is evidence of a decline in radio ownership in some developing countries. With the onset of worldwide recession in the late 1970s, which is still greatly affecting the poorest regions of developing countries, the purchase of radios or batteries is not foremost in the minds of people struggling with daily survival.

A lack of batteries and the need for foreign exchange for more essential commodities are major problems in many developing countries with severe balance of payments difficulties. In Tanzania, where there are two factories that could produce enough batteries to meet the local demand, most are now being exported for foreign exchange purposes. As a result,

(Continued on page 3)

batteries currently cost as much as US\$2 each — more than 10 percent of an urban Tanzanian worker's weekly wage, and an even higher proportion of a rural dweller's income.

The dual problems of battery supplies and the shortage of radio repair services have become major obstacles to further expansion of radio ownership in developing countries. The cost of batteries has stimulated the increased use of plug-in radios, but most developing countries have only limited electricity supplies outside urban areas. And, after all, the main attraction of the battery-powered transistor radio has been its portability. As a result, attention has turned to developing an inexpensive, maintenance-free, solar-powered radio that will require no other electrical supply source.

Until these supply and distribution problems are solved, the question remains: Will a Zambian farmer ploughing his field while a transistor radio swings from the harness of his bullock become an image of the past? ■

Graham Mytton is Head of International Broadcasting and Audience Research for the British Broadcasting Corporation. He was previously a producer in the African Service of the BBC, and a Zambian Broadcasting Services Research Fellow at the University of Zambia.



A demonstration of how a brain scan of a patient is telecommunicated via INTELSAT's satellite to a remote diagnosis center.

(Bouck continued from page 1)

In order to further professional and vocational education, lectures on water management and engineering sponsored by the Higher Education for Development Organization (HEDCO) are being transmitted on a bimonthly basis from University College, Dublin, Ireland to the University of Amman in Jordan. Approximately three hundred participants, both students and professionals in the field, attend these lectures.

Because providing medical information over great distances is difficult, developed and, to a lesser extent, developing countries are turning to satellite technology. The Miami Children's Hospital is sponsoring a large and very successful project to bring the latest techniques and information on pediatrics to doctors in South and Central America. (See article in this issue.)

In another health project, brain scans are sent via telephone lines from Nairobi, Kenya to St. Johns, Newfoundland, Canada, where diagnoses are performed. This same facility maintains a link with the Makerere Medical Center in Kampala, Uganda to support their small staff of doctors and trained personnel, helping them to serve a much larger population than otherwise would be possible.

More Ideas for SHARE

Other projects also are in various stages of preparation or operation. Some innovative proposals that have been submitted include: using small, transportable microterminals to assist in coordinating famine relief; creating interactive access to international databanks for nutrition education in South Pacific island nations or for children's television programming; and relaying training programs to bring computer literacy to developing nations.

Each SHARE project carries with it a differ-

ent challenge and has attracted an impressive diversity of individuals and organizations. By taking the initiative, these participants have gained insight into the problems and the promises of telecommunication for their countries. SHARE's ultimate goal, of course, is to stimulate developing countries into future activities on their own, building on the skills acquired while bringing expanded services to rural populations.

For further information about Project SHARE contact: Gail Bouck, INTELSAT, 3400 International Drive, NW, Washington, DC 20008-3089. Telex 89-2707, Telephone (202) 944-7825.

Gail Bouck is Assistant Development Affairs Officer in the Office of Policy Analysis and Development Affairs at INTELSAT where she manages Project SHARE. ■

Call for Papers

The International Communication Association is calling for papers and program proposals for its 37th Annual Conference to be held May 21-25, 1987, in Montreal, Canada. Proposals should address one of the nine established divisions, four special interest groups, or the Conference theme of "Ecology of Communication." Proposal submission deadline is November 1, 1986.

For a description of the categories and submission guidelines, write to Robert L. Cox, Executive Director, International Communication Association, P.O. Box 9589, Austin, Texas 78776, USA. Telephone (512) 454-8299.

Supporting Health in Swaziland

by Alfred B. Mndzebele

In order to successfully disseminate health messages to general audiences in a developing country, careful planning and implementation is required. It is important to consider all the components that contribute to bringing about successful change in a systematic manner, including research and evaluation, media, resources, and training.

During 1984-1985, the Ministry of Health in Swaziland applied mass media communication techniques to promote the use of oral rehydration therapy (ORT) to overcome infant dehydration from diarrhea. Building on this successful dissemination activity, another communication campaign was designed for Swaziland's Expanded Program on Immunization acceleration campaign. Radio, print, and interpersonal channels were used to disseminate the ORT messages.

In developing countries, use of these media are often accompanied by inherent drawbacks. Radio messages associated with a project may not be very effective unless they are preceded by adequate preprogram research or built-in feedback measures to assure that the messages are relevant. Print messages are susceptible to misinterpretation because audiences may not have regular exposure either to the written word or to graphic materials. Training programs within an extension system may begin dynamically, but then lose their effectiveness over time without constant updating of training materials and techniques. In light of these constraints, a communication system that endeavors to orchestrate these trouble-prone media into a coordinated program must be based upon a strategy that is developed from a comprehensive, preprogram planning process.

Development Research Phase

Planning the communication component of the Expanded Program on Immunization acceleration campaign in Swaziland began with a development research phase—the first essential step in any development communication project. We conducted field investigations and reviewed data to determine current patterns of rural mothers' behavior, attitudes, and practices regarding immunization. A knowledge, attitude, and practices study was also done in order to systematically plan an in-service training strategy for clinic nurses as well as to gather information for the design of a general health education campaign on immunizable diseases.

In our development research, we were looking for evidence of existing appropriate behaviors to build upon that would lead to increased knowledge and use of immunization, and to uncover areas of audience unfamiliarity that our campaign would need to focus upon. For example, our field research

revealed that Swaziland mothers want their children, particularly those under one year of age, to be protected against traditional diseases through the application of traditional medicines. Building on this, messages were designed that were based on the traditionally practiced behavior of protecting children against diseases. The focus of the messages was not that the diseases were "modern" as opposed to "traditional," but that immunization should be practiced on their young children as is other protective behavior.

In addition to designing messages based upon our research, we were able to implement three other components of our planned development communication project:

1. **Media Use:** By determining current media use behavior, attitudes, and knowledge of the target audience, we could devise health messages that addressed the desired changes.
2. **Resources:** By ensuring that an ample supply of vaccines and refrigerators would be available to implement the immunization campaign, we were able to reach the campaign goal.
3. **Training:** By designing and holding a training program we could be assured that all health personnel coming in contact with the target audience knew their teaching responsibilities.

The Power of Communication

With the experience gained in the use of systematic development communication, we have learned some important lessons including:

- *Systematic development communication commands a special authority.* Research confirms that greater impact is possible when interpersonal communication is combined with radio or TV messages, newspaper items, or poster illustrations.
- *Systematic development communication assures better control of the message.* Since message conception and design are of primary importance, the most desirable means of communication is the one that guarantees the message will be delivered consistently and correctly.
- *Systematic development communication lends a cumulative impact to a message.* Messages that are consistently reinforced through different media produce a greater overall impact and have a stronger psychological advantage over a campaign that does not consistently repeat its message.
- *Systematic development communication reaches audiences more quickly.* Multiple media applications can disseminate the message further than a single medium in a comparable amount of time. A single medium may take months to saturate an audience, whereas repeated use of mass media exposes a larger audience to a stronger dose of the same information in a shorter period of time.

- *Systematic development communication influences other major audiences while directing the message to its target audience.* For example, although directed to mothers, a nutrition message will be seen and heard by farmers who learn of the special emphasis on selected foods, or by government officials whose support for new policies is always necessary.

Without a thoroughly designed communications strategy, otherwise well-planned development projects will be doomed to failure. It is not an exaggeration to say that a development project is only as successful as the communication system that supports it. ■

Alfred Mndzebele is a Health Education Officer with the Swaziland Ministry of Health.

Briefly Noted

by Robert Vittel and William Amt

- IBM has recently released *The Guide to Software in Developing Countries*, a compilation describing personal computer software programs covering the areas of agriculture, economic and social resources, physical infrastructure and administration. Programs described cover a wide range of developing-country applications, among them farm planning, aquaculture management, timber yield forecasting, census processing, population growth monitoring, water supply requirements, foreign debt, loan, and payment monitoring, and many others. The guide also includes descriptions of related software literature, supporting software, national language supplements, (IBM) hardware, a glossary of terms, and a list of software sources. Most materials included in this guide are free of charge. The *Guide* is available at no charge from: Communications and External Programs Manager, IBM Area South, 190 Avenue Charles de Gaulle, 92523 Neuilly sur Seine, France.
- The Pacific Telecommunications Council (PTC) has published the proceedings of their eighth annual conference on *Evolution of the Digital Pacific*, held in Honolulu, Hawaii on January 12-15, 1986. Over 60 of the conference papers appear in this volume. They address issues such as Pacific facilities' developments and requirements; policy, planning, and facilities; business strategies; network applications; socio-economic impacts; educational programs; and others. The 384-page volume is available for US\$45 from the University of Hawaii Press, 2840 Kolowalu Street, Honolulu, Hawaii 96822, USA.
- We have recently received three periodicals that will be of particular interest to our readers looking for literature on educational technology and communications, and informatics. *AGORA: Informatics in a Changing World*, a quarterly journal published by the Intergovernmental Bureau for Informatics (IBI), examines developments in informatics (Continued on page 13)



Training Broadcasters: The Amoz Gibson Training Centre

by Randie S. Gottlieb

In a lush tropical setting fifteen minutes' drive from Arecibo, Puerto Rico, a vital new educational facility has come into being. Situated on a five-acre hillside farm, the Amoz Gibson Training Centre was established in 1982 and is operated by CIRBAL, an international Baha'i field agency for development media. The center provides practical, "hands-on" training in appropriate media and technology for the spiritual, social, and economic development of people the world over.

Within easy reach of all the Americas, the training center shares space with CIRBAL's Broadcast Division, which oversees the planning and construction of Baha'i radio stations throughout the world. These highly successful radio operations have been featured in professional journals because of their unique emphasis on local participation and management, and their innovative educational and cultural programming. Radio stations currently exist in Ecuador, Peru, Bolivia, Panama, and the United States, with others under construction in additional Latin American countries and in Africa. They are staffed by members of the local community, many of whom received their training at the Amoz Gibson Centre. Several articles about Baha'i radio stations have appeared in earlier *Development Communication Reports*. (See Nos. 40, 42, and 44.)

Baha'i radio stations are bases for education and community service. In the Andes, these stations have become the most popular in the region. When the station at Lake Titicaca, Peru stopped broadcasting for a week while awaiting parts for its transmitter, *campesinos* went to the city to demonstrate, thinking the Government had taken the station off the air. In Bolivia, thousands of villagers walked for days to attend festivities associated with the anniversary of Radio Baha'i.

Course Offerings

Originally established to prepare volunteer workers for these stations, the center began with a three-week, 140-hour radio broadcasting course. The course, now offered annually, is organized around an intensive, six-day per week schedule covering the fundamentals of educational and cultural broadcasting, programming and production, legal and technical topics, and management. In the classroom, a wide range of instructional methods are employed, from traditional lectures to role playing, mock interviews, audiovisual presentations, panel discussions, independent projects, workshops, and self-administered exams. Throughout the course, students are immersed in a multicultural environment designed to foster a spirit of cooperation and

service, in addition to providing instruction in specific knowledge and skills.

An Expanding Curriculum

In response to rapidly expanding media opportunities and the corresponding need for skilled volunteers, the curriculum has evolved to become an integrated program in Development Communication with six to eight training sessions held each year. The program is intensive and practical, designed to prepare students for all communication-related aspects of project management, including technical maintenance and the training of others. The curriculum is divided into five broad areas: hardware, software, human development, international service, and participatory media theory and practice — all presented from a Baha'i perspective. Academic offerings range from weekend workshops to month-long courses in communication management, broadcast engineering, graphic arts, radio programming and production, photography, scriptwriting and announcing, silkscreening, journalism, and exhibit design.

Special Training

Courses have also been designed to meet the needs of special groups, like that given for the future staff of the Baha'i radio station recently constructed in rural Panama. Instructors for this course were challenged to develop new teaching methods appropriate for the Guaymi Indian participants, who had little formal schooling and no experience with even the most basic audio production equipment. In one session, students learned to produce "oral scripts," in which pictographs are organized into an outline that then serves as a

guide for a radio interview or presentation. In the evenings, the Guaymis alternated between studying and sharing beautiful examples of their folktales, traditional music, and dance. During the final course evaluation, they commented that the two-week session had taught them "what radio *really* is and what it can be — for education, for our culture, for teaching humanity . . ."

Occasionally, the center sponsors off-campus activities such as a 14-country media training trip through the Caribbean in 1984, and an international "Scriptwriting, Programming, and Production Workshop" conducted for staff members and managers from three Baha'i radio stations in South America, that was held in Puno, Peru, during that same year.

As one of the very few institutions that offers training for media trainers as well as for local participants in a media project, the Amoz Gibson Centre has brought in students from over 25 developing nations, including members of national Baha'i administrative bodies, nonliterate villagers, university professors, young people investigating career possibilities, and North Americans who train to serve abroad as volunteer workers and as consultants to the local project staff. Classes are conducted in both English and Spanish — many times on a fully bilingual basis. The center is currently consulting with several universities about the possibility of offering joint degree programs, a step that will allow eligible students to receive college credit for courses taken at the Arecibo campus.

The center has attracted a highly qualified faculty with extensive media and international

(Continued on page 6)



Amoz Gibson Centre students preparing to shoot their first rolls of film at a photography workshop.

experience including: the executive producer of a national radio education project in Kenya; a doctor of education specializing in cross-cultural communication and media; the manager of a rural black community-service radio station; and a well-known South American TV and film producer who now heads National Radio and Television in Peru.

Staff and faculty are, for the most part, volunteers, contributing their expertise to a "bootstrap" operation whose facilities have been built gradually, financed by proceeds from course tuitions. Much of the equipment and educational materials were acquired through donations.

With its emphasis on appropriate media and technology, the Amoz Gibson Centre also hosts an ongoing program of research and development. In conjunction with CIRBAL's Broadcast Division, faculty members have pioneered inventions ranging from solar-powered community radio to low-cost 12-volt power for lighting and small appliances in rural homes. The center makes extensive use of this alternate energy system to power everything from the ceiling fan in classrooms to the computer in the office.

For the Bahai's, development is largely dependent upon needs at the grassroots, from which it should receive its driving force, rather than by imposition of plans from above. The purpose of the Development Communication program at the Amoz Gibson Centre is to assist these grassroots efforts - promoting education in science and technology, training in the techniques and tools of communication, and promoting respect for the spiritual foundation of human progress. ■

For more information about the center, contact Dr. Randie Gottlieb, Administrator, Amoz Gibson Training Centre, HC 02, Box 14765, Arecibo, Puerto Rico 00612.

Randie Gottlieb is the administrator of the Amoz Gibson Training Centre. She received her doctorate in Media and Instructional Development from Boston University.

1986 Agricultural Catalog

Winrock International has recently distributed an expanded version of their *Agribookstore 1986 Catalog*. It contains over 200 abstracts of agriculture-related publications available through the Agribookstore. For a catalog, write to Agribookstore, Winrock International, 1611 North Kent Street, Arlington, Virginia 22209, USA.

The Brazilian Society of Interdisciplinary Studies of Communication (INTERCOM) is holding its 1986 meeting from September 1-7, 1986 in Sao Paulo, Brazil. The focus of the meeting will be "Communication for Development."

A Media Use Survey in Malaysia

The following article is a good example of how information from a small-scale survey can be used at the local level to improve training courses for audiovisual aids users. With relatively little effort, data can be gathered and assessed for the purpose of pinpointing strengths and weaknesses in local applications of media for effecting change.

by Zaharah S. Keeney and Musa Abu Hassan

The link between effective communication practices, appropriate media use, and successful development efforts is well established worldwide. In Malaysia, however, current development efforts are still highly dependent on oral communication. Research shows that the level of material retention relayed orally is characteristically low, and mere awareness of new ideas and technology is not enough where changes in attitudes and practices are the ultimate goals. At the same time, it has been shown that when interpersonal communication is supported by the use of audiovisual aids (AVAs), it is a most effective means of persuading people to change.

In Malaysia, especially over the last twenty years, the availability of AVAs has increased greatly, but better understanding of their applications is still needed. In order to improve courses given in AVA use and in general communications at the Agricultural University of Malaysia, and to meet future needs of Malaysian organizations involved in agricultural development, the authors conducted a survey of relevant agricultural institutions. Among the 23 agencies surveyed were the Malaysian Agricultural Research and Development Institute, the Rubber Research Institute, the Department of Agriculture, the Veterinary Services Department, the Palm Oil Research Institute of Malaysia, and the Agriculture Bank.

Who Uses Which Aids?

The survey was limited to asking those responsible for an organization's communication division: 1) what communication media and software they owned and used; 2) how they used these aids; 3) who within their organization used them; and 4) where they were used. Twenty of twenty-three agencies responded.

Fewer than ten respondents indicated they provided the following AVA support services: 1) publication and production assistance, 2) equipment and software servicing, and 3) lending audiovisual equipment.

Allocation of funds for AVAs varied widely. Nine agencies reported yearly AVA budgets in excess of US\$4,100. Three agencies reported having AVA budgets between US\$3,400 to

US\$4,100 for 1984. Eight agencies indicated they had no funds specifically allocated for this purpose. Generally, AVA money was used for new equipment, software purchases, and production of publications. However, funds for training staff in the use of AVA equipment were noticeably lacking.

The data indicate that the availability of audiovisual aids and software is not a problem. All agencies have slide and overhead projectors; a majority noted they have public address systems, cassette recorders, pamphlets, black and white, and color photography capability, 35mm cameras, television sets, 16mm film projectors, slides, models, posters, video cassettes, mobile units, and video cameras. However, other questions revealed limited usage of some of these aids.

While a full 75 percent of the agencies reported using AVAs for extension and training courses, indicating that audiovisual aids are being used to support oral communication, a static use pattern is still apparent according to Table 1 below:

Table One
Media Most Often Used by Agencies

Media/AVA	Number of agencies
Slide projector	12
Overhead projector	11
Movies/films	6
Video	3
Pamphlet	2
P.A. system	2
Poster	1
Slide series	1

Although there is potential for greater AVA use with the wide range of audiovisual aids and software owned by agricultural development agencies in Malaysia, users indicate a need for better understanding of when and where AVAs have the most impact on development.

This study, although limited in scope, demonstrates how educators can use this type of data to develop future training sessions. It also brings to light other questions for future investigation; for instance, which media and audiovisuals are most effective and for what purposes? In what situations do AVAs contribute the most to learning and attitude change? How can Third World countries develop software more suitable to their particular needs? ■

Musa Abu Hassan and Zaharah S. Keeney are lecturers with the Department of Development Communication at the Agricultural University of Malaysia, Serdang, Selangor. Musa specializes in communication media, and Keeney in technical writing. Both conduct in-service training courses in these subject areas.

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Women, Communication, and Primary Health Care

by Elayne Clift

Women provide more health care than all the world's health services put together, according to United Nation's data.

Women are often the innovators and opinion leaders responsible for successful diffusion of new health practices in developing countries.

Women's health and status are intricately related to the health of all persons, especially children.

The above points often can be lost or muted in development communication planning, implementation, and evaluation. Conversely, when they are integrated into the complex process of communications designed for primary health care in developing countries, outcomes can be vastly improved. Closer examination of each point sheds light on this perspective.

According to United Nation's findings, hospitals, clinics, and health programs are less vital to the world's health than are the actions of women, whose key role in the home enables the rest of the world's inhabitants to eat and drink, to live in a warm, clean environment, and to work outside the home for wages. When illness strikes a family, a mother's intervention is essential: it is the mother who must recognize and treat common diseases, or make the decision to seek outside help. Women have thus become the principal targets and beneficiaries of global programs to prevent disease and to promote health. This emphasis is especially evident in recent programs to promote child survival, using techniques such as oral rehydration therapy (ORT), immunization, growth monitoring, breastfeeding, and child spacing.

Discovering the Key

Women, therefore, play a key role in executing the primary health care approach and in diffusing new health innovations. In the social marketing model of diffusion, the user's perception, preference, and satisfaction are crucial factors in terms of health behavior. Cultural sensitivity and a sound knowledge of the audience are extremely important. For this reason, it is essential that opinion leaders come from the target group.

Dr. Maybelle Aroie understood this when she created what is now recognized as a model primary health care program in the Indian state of Maharashtra. When the program began, trained Indian nurses were sent into villages to work, but these nurses were rejected by the local villagers because they were not indigenous to the community. Dr. Aroie decided that villagers should choose a woman from among themselves—an opinion leader—to be trained as a primary health care worker for her own village. During weekly instructions, the selected women eagerly learned about family

planning, maternal and child health, nutrition, and sanitation. They carried this new knowledge back to the other women in their own villages. Through these interpersonal channels, a new health innovation—a cadre of locally trained village workers delivering primary health care—has been built up to a current ratio of 1:1000 people. The program now extends to over 200 villages, accounting for a population of more than 350,000. This woman-to-woman, door-to-door transfer of information has led to 98 percent of the state's children being immunized, pregnant women receiving regular pre- and post-natal care, dramatic drops in infant mortality and morbidity, and elective sterilization, in most cases, after two children.

Carrying the Message

While health has traditionally been a somewhat reluctant partner of communication, it is increasingly recognized that much health care activity is a form of communication between health providers and health receivers, and not just the provision of drugs and acute care administered in clinical settings.

A growing appreciation for the role of communication in health delivery in developing countries has led to expanding health education activities referred to as the *public health communication approach*. This approach attempts, in a pre-defined period of time, to change a particular set of behaviors in a large audience which has a specific health problem.

"...credibility with rural women... was a key element in the success of this effort."

Here again, women have played a key role in delivering public health messages. In the Gambia, for instance, Executive Producer Ami Joof worked with the country's leading female radio announcer, Maimuna Bah, to produce a series of programs for Radio Gambia. In a program called "Hospital Request," Bah visited rural hospitals and conducted spot interviews with patients. Often, this was the only way for patients to communicate with their families who were many miles away. Bah also conducted another radio program, "For Women Only," during which she provided practical advice about subjects such as child care and personal hygiene, as well as the proper mixing of sugar, salt, and water for oral rehydration therapy. Maimuna Bah's credibility with rural women, and her understanding of their vocabulary and experience was a key element in the success of this effort.

Other women, working primarily within non-profit educational organizations, have been instrumental in assisting host government counterparts to design and implement appropriate public health communication

campaigns. In many countries, illiterate women are successfully producing radio programs and instructional videotapes to be shared with other women. Still other women serve a critical function in the evaluation of messages designed for health; it is often their insight through focus groups, surveys, and questionnaires that helps planners to understand why a project is not working.

Women's Health Status

Women are receiving increased recognition for their contributions in the technical fields of health and for their role as caregivers. What is less well recognized is the relationship of women's personal health status and societies' role in the World Health Organization's goal of "Health For All by the Year 2000." The commitment to saving children's lives is encouraging, and the techniques used to meet the goal are impressive. But has enough thought been given to women's role and status in improving children's health?

Viewing women as extension workers within the health delivery system can be risky unless special efforts are made to understand the reality of women's lives within a developing country context. Women cannot effectively work toward child survival if they are too overworked, malnourished, and sick to deliver and raise healthy children. A woman's own health, especially her nutritional status, is a key determinant in her child's survival. Even with the strongest will in the world, women may lack time, energy, or understanding to do their part in providing primary health care for their children. It is not always easy to prepare special foods in addition to regular meals, or to leave the field to take a child to a health center for immunization or weighing.

Women's skills, creativity, and leadership ability are unquestionably needed in development communications aimed at health interventions. Therefore, it is in the interest of all that women's personal health status be improved and maintained along with that of their children's. The continued success of communication programming to ensure health for all can best be accomplished when women are recognized as active participants and change agents, as well as beneficiaries. ■

The author wishes to acknowledge the contribution of Bernadette Orr of the National Council for International Health, to this article.

Elayne Clift is Associate Director of IHEALTH-COM, an international health communication project, at the Academy for Educational Development, Washington, D.C. This article is adapted from her paper: "Diffusion and Development: Women, Media and Primary Health Care in the Third World" (in press).

A Communicator's Checklist

Methods of Communication Planning, John Middleton and Dan Wedemeyer, editors (Paris: Unesco, 1985) 487pp.

Methods of Communication Planning is Unesco's third monograph on communication planning. This edition was prepared by the East-West Communication Institute, Honolulu, Hawaii.

The need for efficient use of resources and the importance of systematically planning ahead are irrefutable. The question is, what planning methods are appropriate for the design and management of communication projects in developing countries? This book suggests using the method of systems analysis and its derivatives such as: resource assessment, trend extrapolation, the Delphi technique, scenarios, simulation and gaming, cross-impact analysis, input-output analysis, zero-based budgeting, and goal achievement matrices.

The book begins well with two chapters by Middleton presenting definitions and a sensitive conceptual framework. These introductory chapters rightly stress that the nature and methods of communication planning in developing countries should reflect the nature of their social, economic, and political conditions. Would that the methods prescribed in the subsequent 21 chapters provide supporting evidence on the appropriateness of this methodological technology. Actual experiences with its use, given the constraints on the availability of technologically skilled human resources and information data bases, are lacking.

The question is asked: What basic requirements must be met by users of systems analysis techniques in communication agencies? First, systems analysis requires large amounts of reliable, quantitative data, and hence good data collection and data analysis mechanisms. Many developing countries do not have accurate birth and mortality statistics. Wedemeyer's successful use of trend extrapolation to estimate probability of occurrence of electronic shopping in the U.S., Satia's use of *estimate* rather than real data, and the large number of illustrative *imaginary hypothetical* cases used in this book speaks loudly of the lack of experience with these methods in developing country communication planning.

The book recognizes the limitations of systems analysis approaches that are preoccupied with efficiency criteria, but it does not deal with it other than to say, "In the Third World, the absolute need for efficient use of resources can lead to unequal access to communication resources in society, and the use of communication for domination and exploitation." Systems analysis methods demand quantification; if a dimension of the problem is not quantifiable, it is not counted. Thus, reliance on systems analysis alone can lead to quantitative conceptualizations of communication, even though communication and its financing are

essentially social, political, and economic in quality.

Therefore, it is with relief that I turned to the chapters on the more inclusive data collection methods and planning tools such as brainstorming, planner's workshops, suggestions for interorganizational coordination, and the case study and sample surveys presented by those who had used them in developing-country settings.

Written in technical terms, for the most part, *Methods* illustrates the transfer of systems analysis techniques to the civilian communication sector in developing countries. Systems analysis originated in the unique political environment of developed-country defense and aerospace establishments with methods drawn from engineering, math, statistics, and economics. The approach has been applied to public policy and planning in the U.S., and has been found wanting. *Methods of Communication Planning* presents a prescription for developing country communications without significant in-country trials. Middleton's introductory framework deserved to be followed up by readable documentation of planning attempts made by communication practitioners operating within developing country constraints as illustrated by some of the contributors, particularly Beal, Domingo, Herms, and Dissanayake. ■

Available in the U.S. for \$37.25 plus 5 percent for postage, from Bernan/Unipub, 10033 F, Martin Luther King Highway, Lanham, Maryland 20706, USA, or from Unesco booksellers worldwide.

Reviewed by Bella Mody, currently teaching Telecommunications at Michigan State University. She participated in the Indian Satellite Instructional Television Experiment (SITE), and has worked in Nepal, Thailand, Malaysia, and other developing countries, specializing in the design and evaluation of media systems.

Media Education, by Zaghoul Morsy, editor (Paris: Unesco, 1984) 406 pp.

Bringing together the work of 25 writers representing 16 countries, the editor of *Media Education* has assembled a group of articles that focus on a major problem in education today, as succinctly stated in the preface:

...all over the world, there coexist two sources of information and knowledge for school-age children. There is the traditional school, that of writing and books ... facing it, around about and all pervading, is the "parallel school" of the media, whose techniques, operation, modes of presentation, and even content are completely different from those of the school and which subject the intelligence, the emotions, and the moral

character to a substantial influence that is not always in keeping with the aims pursued by education.

The first two sections of this book discuss some of the relationships between formal education and media from several points of view. It is pointed out that the traditional concept of mass media is no longer adequate, since the process of education must be considered as related to the use of videotape recorders and satellites. It is suggested that the roles of the two parallel schools should reflect three criteria: the need for communication, the individual's mental development, and the individual's preparation for work.

The third section considers some teaching and learning strategies that might be considered in integrating the parallel schools. Some of these are that:

- It is important to know more about mass media and the roles they can play in the education process.
- Audiovisual materials can help learners absorb and integrate new information.
- Computers offer new possibilities in information storage and retrieval for education.
- Information from mass media must be integrated with school curricula.

Sections four and five address communication activities and programs that have been successful in Europe, Asia, and the Americas. Examples are taken from Norway, Switzerland, Finland, Australia, Brazil, Cuba, Japan, France, and the United States.

In section six, focusing on developing countries, India is used as an example where the media have tended to channel information and entertainment to urban and wealthy rural residents. India's high hopes that mass media would play an important role in aiding development have not yet been fulfilled.

Two questions are raised in a discussion of mass media and the transmission of values. What is the power of media in transmitting foreign values to school-age children, and do these values conflict with those that are fostered in the formal educational system? The author notes the importance of introducing media education into the schools in order to reduce the disparity between the two value systems.

In the final section, the differences between education and mass media are discussed. The writer concludes with the point that new technologies, the availability of additional broadcast channels, interactive systems, reduced costs, and other factors will enter into the picture in the next decade, but that changes will come through the educational system, not through technological developments.

It is not possible to fully summarize the variety of facts and opinions presented in *Media Education*. Many important ideas are expressed that are worth careful study by those

who are concerned about education.

One point this reviewer would make in summary, is that a major barrier to the effective use of instructional technology has been the traditional classroom system. Education, to be truly effective, must develop new structures that make optimal use of facilities, personnel, and all appropriate forms of media. ■

Available in the U.S. for \$22.50 plus 5 percent for postage, from Bernan/Unipub, 10033 F. Martin Luther King Highway, Lanham, Maryland 20706, USA, or from Unesco booksellers worldwide.

Dennis W. Pett is Chairperson of the Instructional Systems Technology Program at Indiana University. He was the Chief-of-Party for a USAID/University of Indiana Communications Media Project in Nigeria.



Women and Media: Analysis, Alternatives and Action.

K. Bhasin and B. Agarwal, editors. (New Delhi: Kali for Women, 1984) 132 pp.

Women and Media is a collection of articles which alerts development and mass media communicators that women of the Pacific and Asia regions are going to start to "fight back" and create their own media. The articles have been compiled by Isis International, an international women's information and communication service, and the Pacific and Asian Women's Forum, a network concerned with women's issues.

In Part One, several highly critical yet insightful articles assess the societal effects of development communication's and mass media's portrayal of women. In "Women, Development and Media," Kamla Bhasin, one of the editors, sets the tone for the journal. She says that development communication and mass media "reinforce the conservative view of women and ignore their economic participation and contribution..." She believes that women have been neglected because "their concerns and interests remain unarticulated." Her conclusion calls on women to create media alternatives "to inform and empower women, to get women out of their isolation."

In the second section, "Action/Alternatives," the reader learns that women are no longer "passive consumers of sexist media," but "active agents in media creation." The 13 articles in this section represent a wide array of actions and alternatives, including launching a campaign of protest against sexist, negative, and distorted portrayals of women; involving rural women in video production to make a development program more relevant to their situation; publishing a women's journal totally supported by individual donations and non-sexist advertising; and organizing "jalsas" — a special kind of public gathering at which women from all walks of life communicate their concerns and raise the consciousness of others through entertainment, speeches, and resolutions. The editors selected articles that show how women are involving other women through participatory and non-hierarchical interaction.

Over half of the articles are from India or written by Indians. As the editors explain, this reflects easier access to, and familiarity with,

evidence there of media analyses, action for change, and alternatives." However, the remaining articles from Sri Lanka, Malaysia, Australia, Pakistan, Bangladesh, and Thailand, indicate there is much happening in other Asian-Pacific countries as well.

Unfortunately, none of the articles focus on the status of, or employment opportunities for, women in mass media and development communication. This omission leaves the reader wondering what progress, if any, has been made by women in these potentially influential areas.

As a whole, this book begins to fill the gap in media literature of the region, on the relationships between women, media, and development. There is a weakness, however, in several of the articles, particularly in the "Action/Alternatives" section, in linking examples from these three areas.

These are minor drawbacks, however, since *Women and Media* is successful in revealing how women are taking creative steps to change how they are viewed and presented by development and mass media communicators. This book gives them a good opportunity to share their strategies with women in other countries. Also included is a useful list of key women-oriented media resources and networks and a selected bibliography on women and media issues and programs. ■

At a time when technological advances are expanding the outreach and impact of development communication and mass media worldwide, *Women and Media* is important reading for those who are concerned with women's role in social and economic development. ■

Available in English and Spanish from Isis International, via Santa Maria dell'Anima, 30, 00186 Rome, Italy for US\$6.00.

Reviewed by Deborah Ziska, Director of Press and Media Communication for OIEF International, a nonprofit development organization focusing on women in developing countries.

New Ph.D. Program at University of Hawaii

September 1986 marks the commencement of a new Ph.D. program in Communication and Information Sciences at the University of Hawaii at Manoa. This new interdisciplinary program will focus on the training of telecommunication researchers and policy analysts to serve the rapidly emerging government, business, and academic needs in these areas.

For further information contact Dr. Miles Jackson, Chairman *pro tem*, Doctoral Program in Communication and Information Sciences, Graduate School of Library Studies, University of Hawaii at Manoa, Honolulu, Hawaii 96822, USA.

(Noted continued from page 4)

related to national strategies and policies, projects and applications, education, technology, law, and impact on society. This is a colorful, well-illustrated publication printed in English, Spanish, and French. For subscription information write to IBI, 23, viale Civiltà del Lavoro, 00144, Rome, Italy. *Tecnologia Educativa*, a bimonthly journal of the *Associação Brasileira de Tecnologia Educativa (ABT)*, (Brazilian Association of Educational Technology), covers recent developments and applications in educational technologies mainly in Brazil. It is available in Portuguese only from ABT, Rua Jornalista Orlando Dantes, 56 Botafogo, 22231 Rio de Janeiro, RJ, CEP 22231, Brazil. *Tecnología y Comunicación Educativas*, a new quarterly publication of the *Instituto Latinoamericano de la Comunicación Educativa (ILCE)*, (Latin American Institute of Educational Communication), reports on educational advancements in technology and communication in the 13 Latin American member countries of the *ILCE*. Progress in education, educational technologies, professional training, *ILCE* research, proceedings of *ILCE* meetings, and new publications are covered in each issue. This publication is available in Spanish only from: *ILCE*, Juan Luis Vives, 200-1 Col. Chapultepec Morales, C.P. 11570, México, D.F., México.

● In the past, agricultural advancements may have raised overall farm production levels in developing countries, but the improved living standards that were promised to small farmers seldom materialized. *Five Essays on Science and Farmers in the Developing World*, edited by Steven Breth, is a collection of scholarly papers that examines how science and technology can be tailored to address farmers' needs in a way they can understand and afford. The essays raise such points as: the need for new technologies to be integrated into existing socio-economic systems rather than into the pedagogy of natural science; that development planners need to prepare logical and systematic plans; that the diminishing returns of some agricultural research may not warrant continued funding; and that scientists and decision-makers should recognize that farmers know their own environment well, and can contribute valuable information that will improve the effectiveness of new technologies. Available in English from Winrock International Institute for Agricultural Development, Route 3, Morrilton, AR 72110, USA. ■

Communication Tech Conference

Between August 25th and 30th, 1986, the International Association for Mass Communication Research will be holding its Fifteenth Conference and General Assembly in New Delhi, India. The session's theme is "*Communication Technology, Development, and the Third World*." In a coming issue of *DCR*, we will report on the proceedings of the Conference as information becomes available.

Influencia de la Comunicación en el Campo

DCCR has frequently received requests for foreign-language translations of its articles. Although we cannot translate the entire newsletter, we will, as we have below, carry Spanish or French language articles from time to time, to more widely disseminate information on the impact and uses of communication technologies in developing countries.

by Mario Villarroel Terán

En apariencia, no obstante las medidas de orden social y económico resultante de una reforma agraria, el altiplano boliviano no ha cambiado. Y así parece, porque los cambios que allí se producen no resaltan a la visión simple de aquellas personas que tan sólo atraviesan los caminos que surcan la inmensa altiplanicie.

Sin embargo, para el observador acucioso que, desviándose de los caminos principales, se adentra por los senderos que conducen a las aldeas, villorrios y pueblos donde habita el campesino aymara, verá que el panorama está realmente cambiando, que se está operando una transformación positiva, especialmente en los modos o formas de vida de ese campesino.

Observará, por ejemplo, que las llamas y asnos tradicionalmente utilizados como animales de carga, fueron sustituidos por bicicletas y camiones, vehículos en los que hombres y productos de la tierra son transportados con mayor rapidez.

A su vista se le ofrecerá una nueva faceta de la forma de vivir del campesino que, por fin, está dejando la triste, antihigiénica y rústica vivienda, para reemplazarla por otra de líneas modernas, un tanto más confortable y dotada de ventanas que, antes de ahora, eran consideradas como los puntos de entrada de las enfermedades y de entes o espíritus malignos.

Se sorprenderá de ver que el campesino aymara, ya no es el elemento huraño y estático, carente de ambiciones y ansias de progreso, sino que se ha convertido en una de las fuerzas más vigorosas con que cuenta Bolivia para su desarrollo.

Una Escena que Cambia Paulatinamente

Y en ese incesante cambiar de las cosas que está ocurriendo en el ámbito rural del altiplano, no es raro observar que colgado del yugo al cual van unidos los animales que tiran el ancestral arado de palo, va un radio-receptor, a través del cual llega hasta el campesino una serie de mensajes que, la mayoría, son emitidos en su idioma nativo.

La temática de esos mensajes se refiere a la agricultura, ganadería, salubridad, mejoramiento del hogar, alfabetización y extensión agrícola, aunque ello en menor proporción en relación al contenido publicitario en pro de artículos de diferente índole.

Este nuevo aspecto en la vida del campesino aymara, se debe en cierto sentido, al advenimiento del "transistor," ese maravilloso invento japonés que hizo posible que el radio, antes de difícil acceso al campo por las limitaciones emergentes de la falta de electrificación rural, llegue hasta los más recónditos lugares del altiplano, venciendo las barreras del anal-

fabetismo y las distancias, cumpliendo su finalidad de informar, entretener y promover la acción de la gran masa de oyentes campesinos.

La Radio, Instrumento de Educación

Entre los campesinos, el que menos o el que más dinero dispone, poseen radios y aún los menos favorecidos por la fortuna, recurren hasta aquellos hogares donde el punto de atracción e interés es el receptor de radio transistorizado. Alrededor de ese aparato se reúnen grupos, unas veces de amable conversación y otras, de interesante cambio de opinión respecto a los mensajes que les entregan los "comunicadores de la radio".

Instituciones educativas, servicios de promoción social y económica, organismos religiosos y otras entidades, estatales y privadas, han volcado su interés al uso de la radio, para hacer de ella uno de los instrumentos más importantes y eficientes en la educación de los grandes conglomerados campesinos que, en Bolivia, constituyen la mayoría de la población.

Escuelas que Surcan el Espacio

En Bolivia funcionan varios sistemas de escuelas radiofónicas que poseen modernos y poderosos transmisores que cubren grandes áreas del territorio nacional. Numerosos centros de alfabetización funcionan a lo largo y ancho de la extensa meseta andina, atendidos por un guía o "monitor" a quien bien podríamos llamarlo "líder" de la comunicación educativa por radio.

Los programas de alfabetización por radio, están demostrando el alcance y eficacia de este instrumento de comunicación que no solamente está siendo utilizado en esos fines, sino que sus contenidos programáticos incluyen diferentes temas, entre ellos preponderantemente la agricultura y ganadería.

Canales para Divulgación Agropecuaria

Si bien no dependientes directamente de organismos creados para atender los problemas del subdesarrollo agrícola, funcionan en Bolivia, programas que se encargan de divulgar e informar conocimientos tecnológicos sobre agropecuaria, cuyo objetivo fundamentalmente es orientar y motivar al campesino hacia la adopción de técnicas para un mejor uso de la tierra y de los recursos naturales que pródigamente nos ofrece.

Trabajando para y en esos programas, han empezado su actuación campesinos genuinos en calidad de "periodistas." No es raro encontrar algún de ellos realizando entrevistas mediante la utilización de una grabadora magnetofónica, para utilizar después ese material en programas radiales que tienen un diseño muy suigeneris y propio de ellos.

Los campesinos no sólo han incursionado en el campo del periodismo propiamente dicho, sino que otros se han situado en el papel

de locutores, libretistas, guionistas y otras tareas propias de la utilización de la radio. Existen interesantes conjuntos de radioteatro que utilizan este género para difundir contenidos educativos. Lo interesante de la programación radial campesina e incluso suburbana, es que se utiliza exclusivamente el idioma nativo de aquellos para quienes va dedicado el esfuerzo educativo.

Al igual que la radio, otros canales de comunicación están actuando masivamente en la adopción de cambios. Y los comunicadores, considérense profesionales o meros amantes del arte de la comunicación, vienen contribuyendo de manera importante a los propósitos de desarrollo socio-económico. Y en ese dramático, como apasionante proceso le toca al campesino el doble papel de gestor y actor, roles que los cumple con un sentido altamente positivo.

Sin embargo, para que la acción educativa sea más eficiente, se requiere preparar a los comunicadores que hacen uso de la radio, capacitarlos para un mejor desempeño de su trabajo y el uso de la tecnología de comunicación.

En suma, que el maravilloso y eficaz instrumento de la comunicación, como es la radio, sea utilizado como verdadero medio de educación, mediante el cual se pueda promover y luego conseguir cambios favorables en los modos de vida de los campesinos aymaras que habitan la gélida altipampa boliviana. ■

Mario Villarroel Terán, Director General de Comunicación Social y Técnica del Ministerio de Agricultura de Bolivia, tiene 20 años de experiencia en programas de extensión agrícola para beneficio de campesinos bolivianos.

(The following is an abstract of the preceding article.)

The Influence of Communication on the Countryside

The lives of Aymaran peasants of the altiplano region of Bolivia have been changed by the adoption of new health and farming practices. Radio has played a major role in bringing about this change. Radio broadcasts now reach into the most isolated areas of the altiplano, overcoming barriers of illiteracy and distance, informing, entertaining, and promoting social action among the peasant audience. Most Aymarans have access to a radio which often serves as a gathering point where they exchange ideas and opinions about the social messages they hear. Therefore, radio has dramatically increased interchange among these people, and is seen as a solidifying force in their communities.

Educational institutions, social and economic service groups, religious organizations, and other public and private entities have begun using radio to educate and inform the Aymarans who make up the largest segment of the

(Continued on page 16)

On File at ERIC

by Barbara Minor

Documents recently entered in the ERIC (Educational Resources Information Center) files include a collection of papers delivered at a conference on nutrition education, instructions for easy-to-make aids for nutrition teaching and learning and a bibliography of materials on curriculum development in population education. *All of these documents are available in microfiche, and two are also available in paper copy, from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Avenue, Alexandria, Virginia 22304, USA. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping costs may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.*

Turner, Sheila, and Ingle, Richard, Eds. *New Developments in Nutrition Education. Nutrition Education Series, Issue 11.* 1985, 235 pp. (ED 261 981).

This monograph is an edited collection of some of the papers presented at the conference on "New Developments in Nutrition" held in London in 1983. One of the strengths of the conference was the diverse background of the participants, who represented more than 30 different countries. This diversity of interest and expertise is reflected in the papers, which examine a wide range of important issues in nutrition education. Discussions are included on the effectiveness of traditional nutrition education activities which have taken place outside the education sectors, and experiences are reviewed which included extensive experimentation with new and different approaches, attitudes, and behaviors. The following issues and problems are addressed: (a) the importance of nutrition education; (b) teaching approaches; (c) teaching resources; (d) the training and education of teachers and individuals; (e) use of mass media; (f) coordination of education agencies; (g) national and local level food and nutrition policies; and (h) evaluation of nutrition education. Descriptions of programs making use of videotapes and radio in Thailand, and mass media in Chile are included. Available from EDRS in microfiche only for 75 cents; paper copy available from the Division of Science, Technical, and Environmental Education, Unesco, 7 place de Fontenoy, 75700 Paris, France.

Barclay, Ellen and Van der Vynckt, Susan. *Easy-to-Make Teaching Aids for Nutrition Teaching-Learning. Unesco Nutrition Education Series, Issue 10.* 1984, 132 pp. (ED 261 772)

This issue of the *Unesco Nutrition Education Series* presents a sampling of ideas for teaching aids created from experiences in developing countries and is representative of materials currently being compiled for the fourth

volume of the Unesco resource pack for nutrition teaching-learning. The selection of easy-to-make teaching aids is designed for persons interested in trying out innovative ways to promote effective nutrition teaching and learning. Instructions for animating teaching and stimulating learners to explore the important problems and issues of nutrition and health are provided. Although learner levels, teaching expertise, educational and cultural environments, and resource availability will differ from area to area, the materials included can be adapted easily to meet local needs. The teaching aids described include flannel boards and flannel graphs, flipcharts, flashcards, posters, bulletin boards, chalkboards, cardboard boxes, educational games, puzzles, drama, demonstrations, tools, and common recipes for paint, clay, and other materials. An initial explanation of the role of teaching aids and suggestions for their preparation are also provided. Available from EDRS in microfiche for 75 cents or in paper copy for US\$10.80.

Curriculum Development in Population Education. Abstract-Bibliography, Series 6. 1985, 112 pp. (ED 260 960).

One of a series of annotated bibliographies (compiled by the United Nations Fund for Population Activities), dealing with issues and problems raised by educators involved with population education programs, this bibliography focuses on curriculum development in this area. Entries are presented in six major categories: (a) Strategies for Curriculum Development in Population Education in the Formal Education System; (b) Strategies for Curriculum Development in Population Education in the Non-Formal Education System; (c) Development of Curriculum Materials in Specific Subject Areas; (d) State-of-the-Art on Curriculum Development in Population Education; and (e) Evaluation and Research in Curriculum Development in Population Education. While Parts One and Two deal with the general processes of developing curriculum materials in the in-school and out-of-school sectors, Part Three details procedures for integrating population education concepts into more specific subject areas. Thirteen of the 16 publications reviewed in this section focus on the subject areas of social studies, home economics, health education, environmental education, science, medical education, hygiene and physiology, biology, teacher education, and geography. The three abstracts for non-traditional education programs deal with various aspects of farm management and agricultural training courses. The publications listed document curriculum development experiences in Asia, Bangladesh, India, Malaysia, Nepal, the Pacific Islands, Pakistan, the Philippines, the Republic of Korea, and Thailand. Highlights of these reports include the conceptual framework and structure of population education, goals and objectives, population education content used in enriching selected subjects at specific grade levels, types of curriculum materials developed, teaching methodologies used, and evaluation tools used to determine the effectiveness of the curriculum materials and teacher training. Subject and geographic indexes are provided, as well as sources for the

publications reviewed. Available from EDRS in microfiche only for 75 cents; paper copy available from the Unesco Regional Office for Education in Asia and the Pacific, P.O.Box 1425, General Post Office, Bangkok, Thailand 10500. ■

Barbara Minor is Publications Coordinator at the ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, New York 13244-2340, USA.

Short Training Courses Offered in Bangkok

The UNDP Asia and Pacific Programme for Development Training and Communication Planning (DTCP), a Bangkok-based service unit of the UNDP, provides short training courses in media-related subjects. Some of the courses available are: "Audiovisual Production Techniques for Rural Development," "Communication Campaign Planning," and "Training, Planning, Management, and Methods." Courses run from two to four weeks, with fees from US\$1,867 to US\$2,910. They are open to government staff who perform training and/or communication support functions in their agencies. Ability to work in English is essential.

For registration information contact either your local UNDP Resident Representative's office or write to UNDP/DTCP, P.O. Box 2-147, 19 Phra Atit Road, Bangkok 10200 Thailand. Cable: UNDEVCOM (Bangkok).

Call for Abstracts

The National Council for International Health (NCIH) is calling for abstracts for its 1987 annual conference to be held June 14-17, 1987 in Washington, D.C. This year's conference theme is *Influencing Health Behavior: Communication, Education, and Marketing*. Subject categories include descriptions and evaluations of communication, education, and marketing (CEM) programs; designing CEM strategies; ethics of behavior change through CEM; communication vs. education vs. marketing vs. other strategies; health behaviors most susceptible to CEM strategies; institutional issues and management; market research and evaluation; training and CEM; private vs. public sector role in CEM; and schools and CEM.

The submission deadline for abstracts is November 15, 1986. For an application write to: Director of Programs, NCIH, 1101 Connecticut Avenue, N.W., Suite 605, Washington, D.C. 20036-4390, USA. Telephone (202) 833-5900.

Satellite Technology – A Vehicle for Health Training

by Norman P. Fenton

Man has long been fascinated with speed and distance, and their relation to communication.

The need to relay important messages has been a concern ever since man has felt the desire to explore beyond his immediate environment.

Today, thanks to the impressive advances in satellite technology, we are able to communicate faster and in ways that, not long ago, only science fiction novels predicted were possible. In the field of health, particularly in the transfer of medical information, patient diagnoses, and continuing educational programs, it is now possible to connect facilities located in opposite corners of the world.

In January 1986, after nine months of development, Miami Children's Hospital, Miami, Florida, initiated a pilot continuing education demonstration program under the sponsorship of International Telecommunications Satellite Organizations' (INTELSAT) "Project SHARE," which has marked a new era in international medical education exchange. (See SHARE article elsewhere in this issue.) The program is composed of a series of continuing medical and health education teleconferences, each transmitting for 24 hours, over a four-day period, and is carried free of charge as part of INTELSAT's 20th Anniversary project.

Miami Children's Hospital is the first and only hospital in the United States designated as a sponsor for this worldwide project. Development of a worthwhile program called for sensitive and complex political and economic negotiating in each of the participating countries. Because of its sophisticated domestic communication network, Colombia was selected as the pilot country to receive the first transmission. Following three months of program design, the Colombian government, via their signatory, Empresa Nacional de Telecomunicaciones (TELCOM) in Bogotá, filed their request to receive our programming.

After INTELSAT's approval of the pilot program, separate negotiations began with other countries as well, including: Venezuela, Costa Rica, Chile, Peru, and the Dominican Republic. Bolivia, Ecuador, and Honduras later joined to receive delayed programming.

Course Transmission Begins

At 8 a.m. on January 27th, 1986, Miami Children's Hospital began its live satellite broadcast of the 21st Annual Pediatric Postgraduate Course, directed by Donald H. Altman, M.D. Twenty-eight specialists lectured on 40 medical topics over the 24-hour, four-day educational course. The program's one-way video, two-way audio format made it possible for physicians at the remote sites to participate in question-and-answer sessions throughout the four-day period. All sessions were translated into Spanish at the remote sites.

A video equipment truck and two satellite

antennas, comprising the portable up-link facility, were taken to the Miami hotel conference site where local health practitioners had assembled for the annual course. A selected team of doctors stood by throughout the four-day course to take questions that were telephoned in from the remote sites as the course proceeded. Similarly, at each remote site, antennas and portable down-link facilities were taken to the designated course facility. Teams of doctors were in place at each site where they fielded and translated questions from their respective audiences and then telephoned them to the awaiting doctors in Miami. Responses were again relayed by telephone once an appropriate specialist had been consulted in Miami. More than 3,500 pediatricians, physicians, and health professionals attended the live teleconference, with an additional 2,500 pediatricians attending the delayed program.

Evaluation

A questionnaire was prepared and sent to all participants to evaluate the effectiveness of this teleconferenced course. Responses were received from six of the nine participating countries—675 questionnaires were returned in all. The responses, as indicated below, were overwhelmingly positive to all of the questions, each of which could be rated from poor to excellent.

Was the subject matter adequate?	87%
Was the presentation clear and adequate?	85%
Did the program enhance you professionally?	82%
Was the transmission clear and acceptable?	85%
Were the visual aids clear?	93%
Did the program have practical applicability?	87%
Was the quality of translation acceptable?	87%
Was there correlation between sound and image?	86%
Did the presentation time seem adequate?	80%
Would you attend another teleconference?	88%

This enthusiastic evaluation response was very gratifying. The successful transmission of the course has set the groundwork for an ongoing series of programs designed to disseminate life-saving medical information at a distance throughout the world.

In addition, this valuable exchange of information was accomplished at a minimal cost to its participants, as it allowed physicians and health professionals throughout the hemisphere to attend the conference without leaving their respective countries. Most remained in their home cities, which means that the course expense amounted to less than five percent of the overall expense they would

have had if attending a similar conference in the United States.

22nd Annual Postgraduate Course

Dr. Altman's annual postgraduate course will again be carried by satellite in January 1987, and will incorporate some of the latest technological advances in audiovisual transmission. It will feature two-way video, and two separate audio channels for simultaneous English and Spanish transmission. The bi-directional video will add an important dimension to the conference, as it will allow leading pediatric figures in these countries to contribute as well. Participating countries where languages other than Spanish and English are spoken will be able to translate the audio portion of the program simultaneously at their country's down-link site, and broadcast the transmission locally. Arrangements are now underway for translations into French, Italian, and Portuguese.

It is predicted that by the 1990s, satellite supported educational programs will be commonplace. With the increasing cost of attending conferences that are great distances from where health practitioners live and work, continuing education via satellite may, in the future, help to fill the gap that might otherwise be created by economic and time constraints. There are still complex issues that must be addressed before satellite conferencing can become an economical alternative for continuing education courses and other health delivery purposes, but this experiment has clearly demonstrated many of the advantages that accompany the use of this technology in the health sector. ■

Dr. Norman P. Fenton is the Director of Business Development and Telecommunications for Miami Children's Hospital. He has participated in over sixty projects related to health care in the Americas during the past fifteen years.

(Villarreal Téran continued from page 14)

Bolivian population. Radio schools and literacy centers are operating across the altiplano, regularly broadcasting educational programs. Other programs contain information that encourages listeners to adopt new agricultural techniques.

The Aymaran peasants who have worked for and in these programs have developed radio production skills and are now producing their own material, sometimes even using tape recorders in the field to collect material to use in broadcasts that they gear to their particular needs. Others have become involved in scriptwriting, program producing, and broadcasting as well. ■



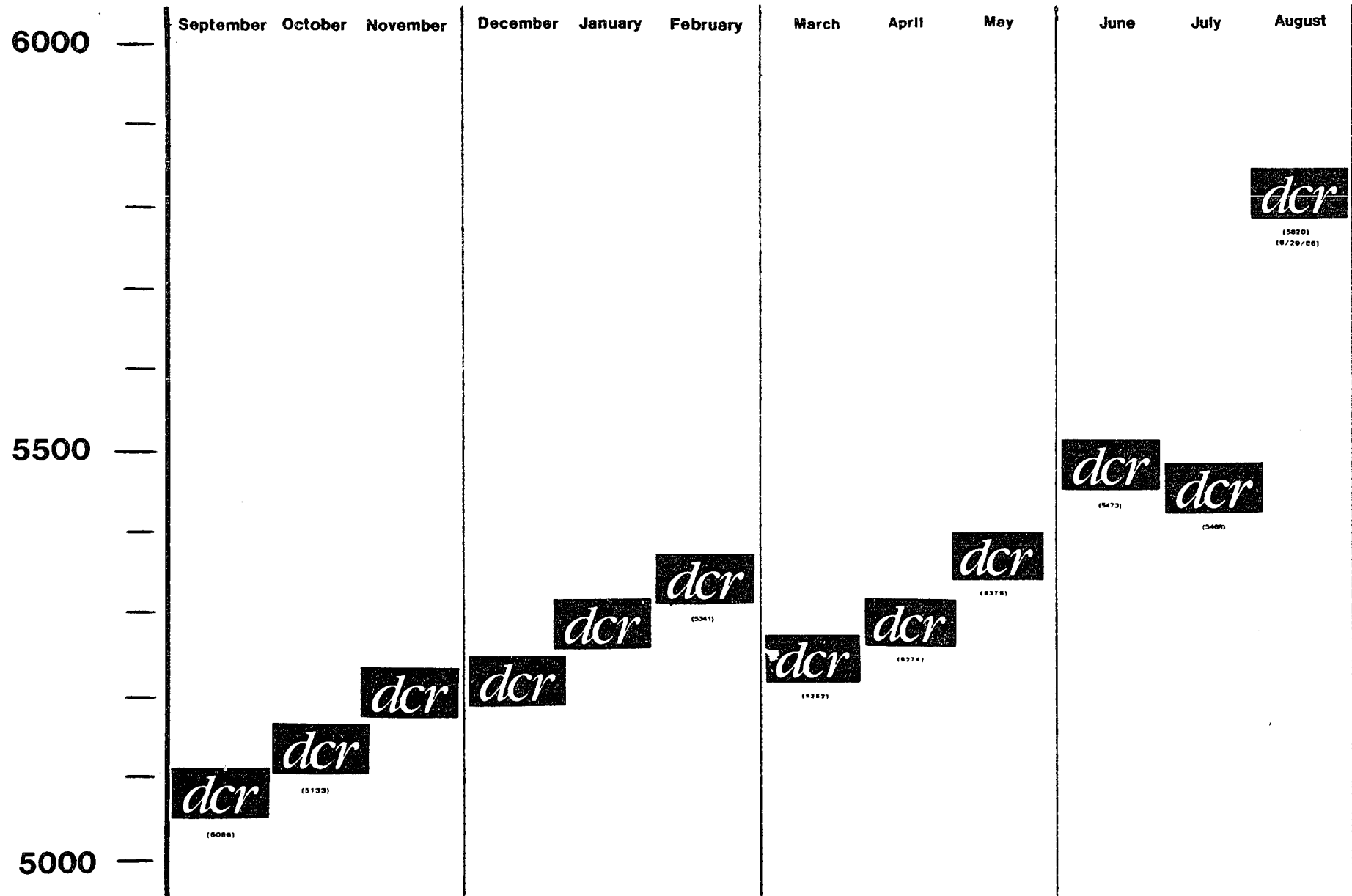
ANNOUNCEMENT

Development Communication Report is a quarterly newsletter that focuses on applications of communication technologies for social and economic development worldwide. Topics regularly featured include education, health, agriculture, nutrition, population, and community development. All media are covered from folk theater to satellites. A copy of this 16-page newsletter is available for your inspection at no cost by writing to:

Development Communication Report
Clearinghouse on Development Communication
1255 23rd Street, N. W.
Washington, D.C. 20037, U.S.A.

DEVELOPMENT COMMUNICATION REPORT

SUBSCRIBERS*: Sept. 1985 to Aug. 1986



* INCLUDES MULTIPLE MAILINGS

AGRICULTURE

ACHIKUMBI PROGRAM Malawi

TARGET AUDIENCE: Malawi farmers

OBJECTIVES: To demonstrate better agricultural practices to individual groups of farmers using mass media programs.

MEDIA: Radio, print, interpersonal communication, film, puppets

DURATION: 1958; ongoing

DONORS/SPONSORS: The Extension Aids Branch of the Malawi Ministry of Agriculture; Unesco

CONTACT: Ministry of Agriculture, Extension Aids Branch, P.O. Box 594, Lilongwe, Malawi

DESCRIPTION:

Malawi's President for Life has always believed that his country's "gold lies in its soil." Since it gained independence from Britain, Malawi's government has focused resources on rural development, making Malawi an exporter of groundnuts, corn, and tobacco. Prior to 1958, the Ministry of Agriculture's Achikumbi (progressive farmer) Program consisted mainly of individual or group visits to farmers by extension agents and of short term training at day or residential centers.

In an attempt to increase the effectiveness of the extension programs, the "Extension Aids Branch" (EAB) was created in 1958 to support the agricultural extension service with a variety of media. Extension agents now use demonstration plots to illustrate better agricultural practices. A fleet of mobile cinema vans covers rural areas showing films produced by EAB that explain improved agricultural practices. These vans also carry educational puppet shows to farmers. Unlike some other agricultural extension programs, Malawi's agents do not handle credit or the sale of seed and/or fertilizer that is promoted in the educational messages. These activities are carried out by the Credit Section of the Department of Agriculture in the Ministry.

In 1960, the Government began two weekly radio programs to encourage rural people to increase farm production with modern farming methods and thereby improve rural living standards. This program is now the responsibility of the EAB which currently produces six programs totaling 4 hours of broadcast time. The broadcasts are written and produced by EAB staff and recorded at a studio in Lilongwe. Broadcasters are extension workers trained in radio techniques. A woman producer concentrates on women's farming needs. The six programs are: Farm Forum, Modern Farming, Cotton, Farmer Request Program, Farmer Notebook, and O'Phiri, a farming family serial.

EAB also publishes a 16-page bimonthly magazine for farmers, Za Achikumbi, which has a regular print run of 32,000 copies. EAB also prints books and other informational materials and pamphlets that are distributed to farmers through the field extension staff.

RESULTS:

A recent evaluation of the EAB's programs showed that they succeed in reaching farmers at lower cost than the more traditional programs. Radio was shown to be the most economical medium to reach the largest number of farmers. Though more than 65% of farmers surveyed identified their extension agent as their primary source of information, significant numbers of farmers learn from radio and the mobile cinema van programs. The number of broadcasting hours of agricultural radio programming has remained constant over the years.

The relative cost per farmer contact per medium used is as follows:

\$30	residential training
\$21	agricultural extension agents
\$4	day training
\$.17	film (mobile van)
\$.08	puppets (mobile van)
\$.004	radio broadcast

Studies by the EAB's Evaluation & Action Research (EAR) Unit have shown that many farmers either are already familiar with the information the EAB is disseminating or they don't have access to the proper tools and inputs mentioned in the messages. However, the EAR Unit has also found that farmers do recall those radio and film messages that are both innovative and appropriate to their needs. Therefore, message pre-testing, as well as relating EAB's mass media with the work of extension agents and agricultural research, would most likely increase the impact of the EAB and thus accelerate the development of Malawi's economy and the well-being of its citizens.

OF NOTE:

- The EAB's film unit produces a number of films annually, most of which cover single topics. Farmers rather than actors demonstrate agricultural techniques in the national language of Chichewa, making the films more convincing for viewers.
- The annual audience for puppet shows was calculated at one to two million people per year, with a large proportion of that figure being children.

REFERENCE:

"Basic Education and Agricultural Extension Costs: Costs, Effects and Alternatives," Hilary Perraton, Dean T. Jamison, Janet Jenkins, François Orivel, Laurence Wolff. World Bank Staff Working Papers, No. 564.

Clearinghouse on Development Communication
May 1986

SPEAK MANDARIN CAMPAIGN
Singapore

TARGET AUDIENCE:	The Chinese population of Singapore
OBJECTIVE:	To replace Chinese dialects with Mandarin Chinese
MEDIA:	Press, radio, television
DONORS/SPONSORS:	Government of Singapore
DURATION:	1979; ongoing
CONTACTS:	Dr. Eddie C. Kuo, Department of Sociology, National University of Singapore, Kent Ridge, Singapore 0511; Mr. Lee Seng Giap, Head of the Mandarin Campaign Secretariat, Ministry of Communication and Information, Republic of Singapore

DESCRIPTION:

The sociolinguistic situation in Singapore is complex due to ethnic as well as linguistic diversity among the Indian and Chinese communities. The population is approximately 77 percent Chinese, 15 percent Malay, six percent Indian and two percent other origins. There are four official languages--Malay, English, Mandarin Chinese, and Tamil, while Malay is designated the national language. English is the major language of law, administration, education, and international trade. Mandarin is accepted as the language to represent Singapore's Chinese community in school, public speeches, and official functions, but it is not a native language for the majority of Chinese Singaporeans. In 1980, only 10.3 percent of the Chinese used Mandarin as the principle household language.

In 1979, the **Speak Mandarin** Campaign began. The government had recognized the need for using a common language to educate the Chinese population and to preserve Chinese cultural traditions and values. To achieve this goal, the mass media played a key role.

The mass media in Singapore are structurally regulated and can be easily mobilized to support development objectives as defined by the government. Under the coordination of the Ministry of Communication and Information, the mass media have contributed to the implementation, assessment, and evaluation of the **Speak Mandarin** Campaign.

Even before the campaign was officially launched, media was used to express the government's endorsement of the program. The prime minister discussed the language problems in Singapore on television more than a year before the campaign began; a month before the campaign was launched, a forum on the "Promotion of Mandarin" was organized by the two major Chinese daily newspapers. Following the forum, all three leading papers carried editorials advocating the importance of Mandarin.

A mass rally, which was attended by several hundred Chinese community leaders and representatives of various Chinese associations and community groups, marked the official launching of the campaign in 1979. The rally was broadcast live on both television and radio. Since then many forums, news articles and broadcasts have contributed to the success of this campaign. From late 1979 to late 1980 during three televised forums, the prime minister made use of television to explain his views on the language issue in general and the **Speak Mandarin** Campaign in particular. In addition, the press, particularly the Chinese daily newspapers, has covered the promotional activities and printed editorials to comment on the campaign.

In support of the campaign (whose activities are focused during one month every year, usually in October), the Chinese press has also organized public forums, student debates, composition contests, story-telling contests, distribution of pamphlets, free T-shirts with campaign slogans, and prizes for customers heard using Mandarin at shopping places. The Chinese newspapers have displayed posters and banners in public places with campaign messages designed to promote the use of Mandarin for better communication and national progress. Campaign messages have, in addition, been inserted into newspapers as "fillers." Similar messages have been announced on the radio and flashed on television.

RESULTS:

Campaign assessment took place mainly through the press in a variety of ways. First, the day after the official campaign opening, all major newspapers reported not only the opening ceremony and the prime minister's speech, but also responses of people from differing backgrounds. The majority of the views expressed were enthusiastic and supportive. The two leading Chinese papers, in addition, published a special "campaign page" which reported public opinion every day during the first few weeks of the campaign. The views expressed in the Chinese papers were primarily of those with Chinese educational backgrounds, and were very supportive. The English language paper also ran special pages on the campaign. The English language paper represented Chinese with English educational backgrounds and non-Chinese. These readers were supportive as well, although they were more reserved.

A second form of feedback in the assessment of the campaign were editorials and letters to the editor. Again, these proved to be generally supportive with some suggestions and criticism. Finally, the press served in the evaluation of the campaign by conducting large-scale surveys of the campaign's effects. Through one newspaper survey in 1981 it was reported that 81 percent of Chinese Singaporeans between the ages of 12 and 19, were speaking Mandarin more often than they had before the campaign. The press has continued to carry out similar surveys in subsequent years.

OF NOTE:

- o **Rediffusion**, the commercial cable broadcasting service, has reduced its programming in Chinese dialects and has a target of 80 percent Mandarin programming.
- o Other government and nongovernment organizations have also been requested by the Ministry of Communication and Information to carry out surveys on language use in various domains (among bus passengers, taxi drivers, people visiting government offices, etc.) periodically. While some of these survey findings are reported by the mass media, most are classified as confidential and apparently are used only as reference materials by the Ministry.

REFERENCES:

Eddie C.Y. Kuo, "Mass Media and Language Planning: Singapore's 'Speak Mandarin' Campaign," Journal of Communication, Spring 1984 pp. 23-35.

Clearinghouse on Development Communication
January 1986

PROJECT IMPACT

Philippines

- TARGET AUDIENCE: Primary school children
- OBJECTIVE: To develop an effective and economical delivery system for mass primary education
- MEDIA: Interpersonal contact, printed supplementary materials
- DONORS/SPONSORS: South East Asian Ministers of Education Organization (SEAMEO), International Development Research Centre (IDRC), Educational Development Projects Implementing Task Force (EDPITAF)
- DURATION: 1974; ongoing
- CONTACTS: Pedro Flores, Senior Program Officer, FAD, International Development Research Centre, Tanglin P.O. Box 101, Singapore 9124, Republic of Singapore; Director SEAMEO, Regional Center for Education Innovation and Technology, College of Education Building, University of the Philippines, Dilman, Quezon City, Philippines; William Cummings, Science Resources Studies, National Science Foundation, 1800 G St., NW, Washington, DC 20550, U.S.A.

DESCRIPTION:

Project IMPACT grew out of the desire of the South East Asian Ministers of Education Organization (SEAMEO) for solutions to the problem of providing mass primary education. After a series of meetings in 1972 by SEAMEO Technical Working Groups, the SEAMEO Regional Center for Educational Innovation and Technology (INNOTECH) was charged with the responsibility of meeting the priority of "Development of an Effective and Economic Delivery System for Mass Primary Education." **Project IMPACT** stands for Instructional Management by **PA**rents, **C**ommunity, and **T**eachers.

Originally labeled the "No More Schools Concept," **Project IMPACT** in the Philippines uses community resources to deliver educational programs and thereby reduce the costs of conventional education infrastructures. The key to success is making the delivery system a community responsibility rather than a government responsibility and by applying the techniques of programmed instruction and self-paced instructional modules. By calling upon members of the community with special skills such as carpenters or tailors; using parents, older siblings, or neighbors to tutor; and having tutors from upper grades help students in lower grades, education becomes everyone's activity. Students work on learning modules at their own pace wherever they are -- at home, on school grounds, in the field -- when they can. These modules are written and produced by local school teachers guided by local leaders and a few short-term consultants. Teachers become, in effect, more than delivery agents of instruction -- they become managers of instruction. Their new title, "Instructional Supervisor," reflects this changed role.

The first two and one-half years of primary schooling is delivered using programmed instruction by older students. Then there is a period of "transition" for the last half of the third year when students are trained in self-paced learning skills. By grade four, students have reading skills sufficient to begin their own self-paced instruction in peer groups of four to six children.

Learning modules cover the same material taught in conventional schools. They are anywhere from 32 to 100 pages long and are easily and economically reproduced and/or modified. Modules are divided into segments designed to be completed in two to four hours of the student's own time. Each segment contains self-tests to gauge the student's comprehension of new material.

Under the supervision of a regional coordinator, Instructional Supervisors monitor the delivery of basic education skills at community learning centers. The self-paced learning modules offer a quick way to observe problems experienced by individual students. Instructional Supervisors oversee the distribution of learning modules and check the mastery level before assigning the next module. If necessary, students can be provided extra instruction by students from higher grades, or from family members, or other adults can be called from the community to help.

RESULTS:

The **IMPACT** system of decentralized education provided low cost elementary education without sacrificing quality. Cost comparisons between **IMPACT** and more traditional schooling show that cost of operations is significantly lower -- almost 50 percent lower in some cases -- primarily because of the increased pupil-teacher ratio. Periodic formative evaluation projects are built into the system. Test instruments designed to focus on both national and local performance have indicated that **IMPACT** students score higher than non-**IMPACT** students, especially average and slow learners.

Despite the positive aspects of **Project IMPACT**, official and international support for the program has declined in recent years. The government has been unwilling to substantially fill the void created by the pull-out of international funding. Officials believe that **IMPACT** schools should be community supported and receive minimal funding. As a result, several sites have closed because funding and local resources have not been sufficient to maintain the project, such as replacing worn modules.

OF NOTE:

- Versions of the Philippines' **IMPACT** system have been established in Indonesia (**PAMONG**), Malaysia (**InSPIRE**), Jamaica (**PRIMER**), Liberia (**IEL**), and Bangladesh (**IMPACT**).
- **IMPACT** has succeeded where there is strong regional and local leadership and where parents see the system as a vehicle of upward mobility for their children.
- Because the family structure is strong among Filipinos, a modified version of peer group instruction organized the entire **IMPACT** school population into "families." Each "family" consists of 60-100 pupils from grades 1-6, and a family leader who is considered an "aunt" or "uncle" is elected. This structure facilitates managing programmed teaching, peer-group learning, and self-instruction.
- Instructional materials have been found to be effective and of good quality, though they are produced by teachers in the field rather than by educators in the capital.

REFERENCES:

William K. Cummings, Low Cost Primary Education: A Six Nation Study of the Conceptualization & Diffusion of an Educational Innovation, IDRC, Ottawa, Canada, 1986.

Pedro V. Flores, Educational Innovation in the Philippines: A Case Study of Project Impact, IDRC, Ottawa, Canada, 1981.

Pedro V. Flores, The IMPACT System of Mass Primary Education, IDRC, Ottawa, Canada, 1983.

"Project Impact: A Terminal Report," SEAMEO, Manila, Philippines, March 1980.

Clearinghouse on Development Communication
May 1986

**NATIONAL CONTROL OF DIARRHEAL DISEASES PROJECT:
ORT COMMUNICATION CAMPAIGN
Egypt**

TARGET AUDIENCE:	Egyptian mothers with children under three, doctors, and health personnel
OBJECTIVES:	To educate the target audience about diarrheal disease, to promote the use of Oral Rehydration Therapy (ORT), and to lower the child mortality rate
MEDIA:	Television, radio, print, film, slide shows
DONORS/SPONSORS:	Government of the Arab Republic of Egypt; U.S. Agency for International Development
DURATION:	1982-1987
CONTACT:	Executive Director, National Control of Diarrheal Diseases Project, 20A Gamal El Din Abul Mahassen Street, Garden City, Cairo, Egypt

DESCRIPTION:

Over 60 percent of deaths of Egyptian children under the age of three are caused by diarrheal disease. The majority of these deaths are due to diarrheal dehydration and could be prevented by rehydration therapy. In late 1982, a five year project began, with a goal of reducing child mortality due to diarrhea by at least 25%. The overall program, the National Control of Diarrheal Disease Project (NCDDP), has six components: 1) production, packaging, and distribution of oral rehydration solution (ORS); 2) training in oral rehydration therapy (ORT) for physicians, pharmacists, nurses, and mothers; 3) clinical, social, and economic research related to ORT; 4) the use of television, radio, and other public media to promote the project nationally; 5) integration into the primary health care network; and 6) evaluation. A communication campaign strategy, using primarily television advertisements, was designed to educate the target audience about the dangers of diarrhea and the benefits of oral rehydration therapy.

Pre-campaign data was compiled to determine the most effective and appropriate channels for the ORT messages. Specifically, research and testing were conducted on the campaign logo, materials design, a name for the rehydration solution, and message design.

Four logo designs were selected from among ten submitted by local artists and advertising agencies. These were then tested in focus groups and in brief, public interviews to determine how people interpreted the logos. Project planners wanted to know what message the logos conveyed, if the logos contained anything objectionable, and which logos were most and least appealing. The most popular design was then tested again in other target groups and modified based on the test findings.

Naming the rehydration solution also required considerable field research. Mothers seemed to favor both emotive and practical names describing the purpose of the solution, while doctors and pharmacists insisted on a precise prescriptive name. The name chosen, The Solution for the Treatment of Diarrhea, is descriptive and scientific.

Because surveys found that over two-thirds of Egyptians have access to television (90% in urban areas), project planners assigned the medium a central role in the dissemination of educational messages about diarrheal disease. Producing precise and convincing TV advertisements (by June 1986 there had been four campaigns) has required diarrhea experts and

doctors to check the medical accuracy of the storyboards' ORT message and anthropologists to test the boards' effectiveness among the target audience. Revisions were made and filming of the commercials proceeded with a well-known personality delivering the message as a testimonial. The first few commercials featured a comedian known to children as "Uncle Fouad;" but subsequent ads have used a motherly actress in an advisor/counsellor role, which has been better received by mothers, doctors, and health personnel alike.

RESULTS:

Between early 1983 and 1984, knowledge of dehydration rose from 32 percent to 90 percent; knowledge of ORS rose from 1.5 percent to 96 percent. Ninety-eight percent of all Egyptian pharmacies now have ORS packets available, and it is now the leading sale item (in volume) of all diarrheal-related drugs in a survey of 300 pharmacists nationwide. Careful documentation shows that mass media made a major contribution to the increased use of ORS from one to nearly 70 percent. There has been approximately a 50 percent drop in diarrheal-related deaths nationwide. The success of NCDDP in Egypt indicates that mass media can help change behavior with proper campaign strategy; but mass media messages must be integrated with availability of the ORS, training of health workers, and constant monitoring and feedback.

OF NOTE:

- Several lessons have been learned from the campaign. 1) A social marketing program must first familiarize government officials with the meaning and importance of "social marketing," and social marketers need to understand the politics of government decision-making in order to be convincing. 2) Leading pediatricians' input to the project should be emphasized with regard to the technical aspects of the campaign message. 3) Extensive formative and summative evaluation of campaign material has contributed to this project's continuing effectiveness.
- A project newsletter publishes information for doctors about clinical care, training of mothers, social attitudes and practices, delivery systems, and nutrition. It also includes original research conducted by physicians in Egypt, much of which is promoted by the project. Training films, print materials, and slides have been produced for health professionals and mothers.
- While conducting target audience research, anthropologists were asked so many health questions by mothers that a series of 30-second TV spots called "Mothers Ask Doctors" was produced based on these questions.

REFERENCES:

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- Norbert Hirschhorn, "Reaching Mothers, Saving Lives: A Communication ORT Campaign in Egypt," Development Communication Report, No.51, Fall 1985, Washington, DC.
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Clearinghouse on Development Communication
May 1986

EKKLESIYAR YAN'UWA A NIGERIA ("EYN")
RURAL HEALTH PROGRAM
 Nigeria

- TARGET AUDIENCE:** Villagers (especially non-literates) of the Lardin Gabas region of Nigeria (Gongola and Borno States)
- OBJECTIVE:** To train village health workers who will return to their communities to promote preventive health care
- MEDIA:** Stories, drama, songs
- DONORS/SPONSORS:** Ekklesiyar Yan'uwa a Nigeria (meaning "Church of the Brethren in Nigeria" in Hausa)
- DURATION:** 1974; on-going
- CONTACTS:** Church of the Brethren Mission, Box 626, Jos, Plateau State, Nigeria;
 Ekklesiyar Yan'uwa a Nigeria, P.M.B. 1, Mubi, Gongola State, Nigeria

DESCRIPTION:

The Ekklesiyar Yan'uwa a Nigeria Rural Health Program (formerly known as the Lardin Gabas Rural Health Program) serves a rural region in the Gongola and Borno States of Nigeria with over 1000 villages of 300-500 inhabitants. Prior to 1974, most health services were located in towns and larger villages, providing institutional and curative health care. Morbidity and mortality rates were very high, most deaths being caused by waterborne diseases. In 1974, the Church of the Brethren Mission (CBM) began a village-oriented, community-based, preventive Rural Health Program. The Program aims at changing health attitudes and behavior through education.

Villages may participate in the Program if they are committed to actively improving the day-to-day health of their citizens. A new member village forms a Village Health Committee (VHC) which is responsible for organizing community meetings and managing daily health care activities. The VHC also selects six villagers (three men and three women) as candidates to be trained as Village Health Workers (VHWs). Each candidate must meet a number of criteria, such as being married and between the ages of 25 and 45, being respected by the various village interest groups, being literate, and being a good story teller.

The training center in Garkida selects one male and one female candidate from each village to attend the three-month course that is offered twice a year. The center's staff uses stories to teach prospective VHWs how people contract various illnesses and what measures should be taken to inhibit their occurrence. Because there are many non-literates in the region and the oral tradition is still a respected method of learning, the training course emphasizes the use of stories, drama, and songs to educate villagers. Topics covered include the value of home cleanliness, hand-washing, latrines, family planning, ante- and postnatal care, and immunization. It is hoped that these themes, explained in the local context, will become part of the everyday routine.

Upon completing the course, the new VHWs return to their villages to begin working in a health post which has been built and furnished by the community, while the Rural Health Program provides a loan to cover the cost of drugs and equipment. The loan is usually repaid in one year from revenue generated by the VHW's curative services. The typical day of a VHW consists of first telling an entertaining educational story to a group of mothers and children that has gathered at the post. The story is not complicated and contains characters and a health message with which

the listeners can identify. The VHW then provides consultations and limited curative treatment which not only serve immediate needs, but also gives the VHW credibility. Cases that the VHW cannot deal with are referred to the nearest clinic.

VHWs also maintain a high village profile outside the health post. They attend and often address various local social gatherings such as church meetings, school groups, and men's and women's clubs. The intended outcome of this public relations strategy is that as VHWs become more visible and their health improvement suggestions (which are supported by the VHC) are seen by villagers as being effective and advantageous, they will be increasingly respected and their stories, dramas, and songs will be incorporated into the local system of beliefs and customs.

RESULTS:

Since the Rural Health Program began, 141 member villages have participated. As a result, incidences of fever, conjunctivitis, neonatal tetanus, leg ulcers, and skin infections have decreased. In one village, a VHW reported that in one year, 35 families had dug their own wells for drinking and washing water, thus eliminating the need to use a nearby swamp, which had caused schistosomiasis and gastrointestinal infections. The Program grows by about 10 villages annually, and the training course always receives more applicants than it can accommodate. The Program has been selected by the Nigerian government as a model health project to be replicated in other parts of the country.

OF NOTE:

- During the training course, only 10 percent of teaching time is spent on diagnosis and treatment of prevalent illnesses. The rest of class time focuses on health promotion.
- To teach stories to prospective VHWs, an instructor tells the story to the class and asks questions that test the students' comprehension and memory. The class divides into groups of four or five, and each person repeats the story to the others in the group. The groups then dramatize the story and present them to each other, after which the groups choose the best interpretation of the story.
- Students in the training course write health-related songs and teach them to their classmates and to their villages when they return as VHWs.

REFERENCES:

David Hilton, ed., Health Teaching for West Africa: Stories, Drama, Song, Wheaton, MAP International, 1980.

David Morley, et al, eds., Practicing Health for All, Oxford, Oxford Medical Publications.

"Rural Basic Health Services: The Lardin Garbas Way," Contact 41, Geneva, Christian Medical Commission of the World Council of Churches, October 1977.

Clearinghouse on Development Communication
July 1986

DEVELOPING COUNTRIES FARM RADIO NETWORK
Canada

TARGET AUDIENCE: Small-scale farmers of developing countries

OBJECTIVE: To increase food supplies and improve the health/nutrition of subsistence farmers and their families

MEDIA: Radio scripts, cassette tapes, print

DURATION: 1979; ongoing

DONORS/SPONSORS: Canadian International Development Agency, Massey-Ferguson Ltd., University of Guelph (Canada)

CONTACT: George Atkins, Director, Developing Countries Farm Radio Network, English Language Division, c/o Massey-Ferguson Ltd., 595 Bay St., Toronto, Ontario, Canada M5G 2C3; Developing Countries Farm Radio Network, French & Spanish Language Division, c/o University of Guelph, Guelph, Ontario, Canada N1G 2W1

DESCRIPTION:

As the populations of developing countries continue to grow, land formerly used for cultivating small-scale, domestic consumption crops is increasingly appropriated for larger-scale, export crops. This process puts pressure on the subsistence-level farmer to grow more crops on less land. When the Developing Countries Farm Radio Network (DCFRN) was established in 1979 the vast majority of small-scale farmers had been largely by-passed by most development programs aimed at increasing food supplies in the Third World. To help solve this predicament, DCFRN provides information on simple, practical farming methods in order to improve national agricultural self-reliance, nutrition, and the welfare of small producers.

DCFRN is committed to assisting small farmers increase their food supplies by providing established radio stations and other local channels of communication with packages of practical agricultural information. Information is assembled on appropriate, simple, transferable technologies used by grass roots-level farmers in the developing world to increase food production, decrease post-harvest losses, and to make more efficient use of food. Only practices that have been developed, tested, and proven in the developing world, and are adaptable in other developing countries are included in DCFRN's information packages. There should be no or very low implementation costs, by relying only on local resources, and requiring neither chemicals nor unfamiliar types of plants or breeds of animals. Also, the advocated methods need to be straightforward enough to communicate effectively by radio.

Information packages consist of up to 17 radio scripts, an optional cassette on which all scripts in the package are recorded, and The Blue Sheet, the Network's newsletter. Packages are available in English, French, and Spanish. The simple scripts are written so that local broadcasters and other agricultural communicators -- the links between DCFRN and farmers -- can readily interpret the materials linguistically and culturally for the farmers they serve. They include illustrations to help communicators understand what they are conveying. Scripts cover a wide variety of agricultural or health and nutrition issues, all within a development context. Agricultural topics have ranged from improving manure to getting more milk from dairy cows. Each package also contains at least one script on rural health problems.

The Blue Sheet, in addition to providing up-to-date information about the Network, also covers other development issues not found in the radio scripts. "The Professional Improvement Corner," a regular column, gives broadcasters pointers on how to make their broadcasts more captivating for listeners, and many such recommendations come from Network participants.

Feedback from the Network's participants is crucial in compiling subsequent material for distribution. The only requirement for receiving the free scripts and cassettes is that an enclosed information poll be filled out and returned to DCFRN headquarters. Participants are asked which segments were found to be most useful, as well as questions whose answers determine the content of future packets. There is also room for comments and suggestions. This data is then collected, analyzed, and integrated into later packages.

RESULTS:

Overall, DCFRN has proven itself as an educational tool. Its success is perhaps best evidenced by the fact that over 600 rural communicators in more than 100 countries regularly disseminate DCFRN information in more than 100 languages. Through radio alone the information is estimated to reach over 100 million listeners. Feedback from participants shows that farmers receive and use information that is appropriate to their particular needs.

OF NOTE:

- In addition to radio broadcasts, DCFRN information has been used in farm and health extension work, newsletter and newspaper articles, government pamphlets, posters, classroom teaching, video tapes, filmstrips, loudspeaker broadcasts, puppet shows, and in other ways.
- Information communicated is totally non-political and the scripts are prepared in a culturally and religiously neutral style in order to appeal to as many listeners as possible. A personable, informal style is followed, as if one farmer were advising another.

REFERENCES:

- "Background Information," The Developing Countries Farm Radio Network, Toronto, January 1984.
- "The Developing Countries Farm Radio Network," L.G. Aked, Department of Agriculture, Lusaka, Zambia.
- "Guess What I Heard on the Radio?" International Agricultural Development, United Kingdom, March 1981.
- "Serving Agriculture, the Basic Industry," The Christian Farmer, Vol. XVII, Winter 1984.
- "The Voice of Agriculture," African Technical Review, United Kingdom, February 1985.

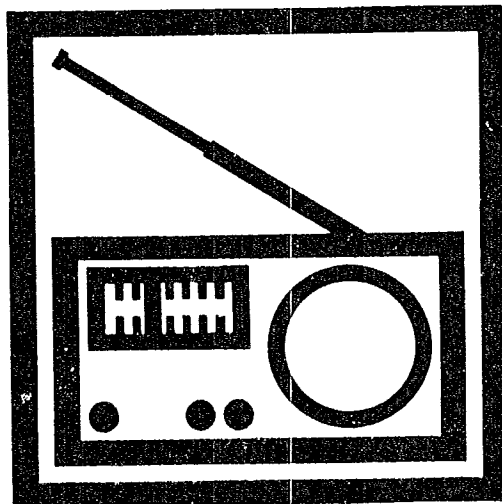
Clearinghouse on Development Communication
March 1986

SELECTED

PROJECT PROFILES

CASE HISTORIES OF COMMUNICATIONS IN THE SERVICE OF DEVELOPMENT

RADIO



CLEARINGHOUSE ON DEVELOPMENT COMMUNICATION
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ASSISTANCE TO RURAL BROADCASTING Afghanistan

TARGET AUDIENCE:	Farmers in the Afghan provinces of Wardak, Logar, Kunduz, and Herat (approximately 17,500 people)
OBJECTIVES:	To improve rural broadcasting as a means of supporting rural development activities and to test the feasibility of establishing in Afghanistan a communication system involving radio, cassettes, and farmers' feedback
MEDIA:	Radio, tape recorders and cassettes, and interpersonal communication
DONORS/SPONSORS:	Food and Agriculture Organization of the United Nations; Afghanistan's Ministries of Agriculture and Education; Australia's FFH/AD; and Radio Afghanistan
DURATION:	Initiated in 1973; implemented in 1976; Phase I terminated in 1977; Phase II pending
CONTACTS:	Trevor L. Stockley, Rural Broadcasting Specialist, Ministry of Agriculture, Kabul, Afghanistan; Abdullah Naik, General President of the Extension Department, Ministry of Agriculture, Kabul, Afghanistan; S.Y. Wasiq, Director, Radio Afghanistan, Kabul, Afghanistan; and Fazel Rahim, Deputy Minister for Agriculture, Kabul, Afghanistan

DESCRIPTION:

The Assistance to Rural Broadcasting Project took shape in 1973 following meetings in Afghanistan of government officials with the Chief of FAO's Development Support Communications Branch. The project was designed to reflect the Afghan Government's desire to keep farmers apprised of improvements in agriculture and livestock-production techniques and to make them aware of the existence and availability of credit, equitable means of distributing irrigation water, and the possibility of forming farmers' cooperatives. By the time the political and logistical obstacles to implementation had dissolved, 1976, the project had acquired a second dimension — that of a communication support system for the national land reform then in progress.

Abandoning early plans to establish and then to test the feasibility of a rural radio forum in Afghanistan, the project directors decided that a communication system involving radio, cassettes, and farmers' feedback would meet local needs better than the conventional radio forum could. Accordingly, tape recorders and one hundred tapes were purchased, and a survey aimed at determining the kinds of information that farmers wanted and could use (and that project employees could provide) was carried out. In December 1976, tapes produced on the basis of the survey findings were circulated in two provinces.

The radio component of the communication system was already well-established in the project area when the project began. Radio ownership in rural Afghanistan is high and the Ministry of Agriculture's Department of Extension and Development has been contributing twenty minutes of programming to the nightly broadcast of "Village, Home and Agriculture." However, members of the production corps and listeners alike were far from satisfied with the quality and content of the broadcasts. To upgrade program effectiveness, then, a foreign consultant was brought into the Radio Unit of the General Directorate of Information and Publishing of the Department of Extension and Development to provide in-service training for one year to the seven full-time staff members. At the same time, additional recording equipment was bought and a staff vehicle was secured for use in making field trips and collecting farmers' feedback.

Fifty-six extension agents from eight extension units were selected to participate in the project. After being briefed and receiving radios, these agents conducted the sixteen meetings that served as the pre-project survey and visited villages on Wednesdays (when "Village, Home and Agriculture" was broadcast) to drum up interest in the radio broadcasts, to distribute cassettes (in Wardak and Logar only), and to solicit farmers' requests, criticisms, questions, and comments.

Reflecting both the strengths and difficulties encountered by staff members in this project, tentative plans for extension of the project beyond the pilot phase specify that the combination of radio, cassette recorder, and extension agent be retained, that a full-time technician/maintenance person be hired, that Radio Unit personnel be well-versed in either agriculture or extension work, that a filmstrip component be added to the media mix, and that more study be devoted in the future to measuring the rate at which farmers adopt improved practices.

RESULTS:

Records kept by the extension agents show that 3,883 of the roughly 17,500 farmers in the target area had heard at least one tape — a finding confirmed by an extrapolation of the figure (22.5 percent) reached in the evaluation survey. In contrast, two out of every three farmers in the area had heard programs on the national land reform, and four out of five of those who heard the message felt that all their questions had been answered satisfactorily.

In addition to exposure to the medium and the message, increases in knowledge, the correlation of contacts (with tapes and extension agents) with radio-listening habits, the relationship between the specificity of the message and the likelihood that the hearers will act upon it, the relationship between the tendency to provide feedback and the tendency to take action based on newly acquired information, and the relationship between the timeliness of the message and the adoption of advice were all studied.

Not surprisingly, the spread of ideas proved easier to trace than the spread of improved agricultural practices. Moreover, little effort was made to measure changes in farming techniques since the project resources were limited. Research did, however, establish that farmers in the experiment acquired information that they considered useful, tended to value cassette-carried (as opposed to that passed from farmer to farmer) information more as they grew accustomed to the medium, and contended more or less unanimously that "Village, Home & Agriculture" had improved markedly during the year of the experiment. The evaluation survey also showed that half the farmers who had heard the tapes listened regularly to the radio broadcast, compared with three in ten of those who had not heard the tapes. As for the hypothesis that the more tailored a particular recommended technique is to local needs the more likely it is to be tried, it held good for only three of the five variables tested.

OF NOTE:

- The pre-broadcast survey revealed that farmers tended to be interested in topics that are seasonal, local, and related to decisions they have to make. Specifically, the cassettes carried information on the control of rye grass in wheat, of rust and smut in wheat, on the pruning of fruit trees, and on the control of field mice.
- Field trips related to the project were far more than whirlwind tours. Some lasted as long as 25 days.
- Post-project research indicated that receptivity to the broadcast and taped messages had nothing to do with a farmer's age and that level of education correlated with willingness to try a new practice with respect to only one of the five variables measured.
- The FAO-employed consultants who conducted the in-service training for members of the Radio Unit developed a training manual, "Notes on Communicating Through Radio," and a glossary of technical terms.
- Wardak and Logar were selected as sites for the cassette experiment because agriculture extension programs in both were already active, farmers and village leaders were prepared to participate in the project, local authorities promised to cooperate, other development projects were under way, control groups could be identified for experimental purposes, and roads were good enough to permit year-round access by a vehicle with four-wheel drive.

REFERENCES:

- "Assistance to Rural Broadcasting — Afghanistan, Terminal Report", TF.AF6.10(FH), Trevor L. Stockley, Food and Agriculture Organization of the United Nations, Rome, July 1977.
- "Development Communication in the Provinces of Wardak, Logar, Kunduz and Herat," Draft, F.A.O., Rome, October 1977.

Clearinghouse on Development Communication
April 1978

(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

FARM BROADCASTING RADIO

Bangladesh

TARGET AUDIENCE:	The rural population of Bangladesh
OBJECTIVE:	To improve agricultural productivity and increase output in Bangladesh by providing information on modern agricultural techniques, marketing possibilities, livestock management, and other development programs
MEDIA:	Radio, interpersonal communication
DONOR/SPONSOR:	The Government of Bangladesh
DURATION:	1973 - ongoing
CONTACT:	S. A. Shahadat, Director, Farm Broadcasting, Radio Bangladesh, House No. 33, Road No. 2, Dhanmondi R/A, Dacca 5, Bangladesh

DESCRIPTION:

Farm broadcasting by Radio Bangladesh began in November 1973, almost two years after the emergence of Bangladesh as an independent country. It was initially aimed at rebuilding the agro-economy which had suffered greatly during the 1971 war, and modernizing agricultural production. In the words of S.A. Shahadat, the Director of Farm Broadcasting, Radio Bangladesh, "The fact that radio is the principal medium of mass communication in Bangladesh warrants its optimum use for development purposes." Entitled "Desh Amar Mati Amar" (My Country, My Land), the program is transmitted daily for 30 minutes from Radio Bangladesh, Dacca, on its national hook-up. It is simultaneously relayed by five other regional stations of Radio Bangladesh: Chittagong, Rajshahi, Khulna, Rangpur, and Sylhet.

In Bangladesh, where the literacy rate is low, radio can play a vital role in educating and motivating people to meet national aims. For this reason, in addition to the national hook-up of farm broadcasts, Radio Bangladesh has begun broadcasting regional 20-minute programs from the six regional stations. These programs cover cooperative farming, self-reliance, daily market rates, information on regional crops, day-to-day agricultural operations, folk women's programs, and listeners' group programs.

Listeners are taught that by developing skills and improving their agricultural methods, not only will they attain a level of self-sufficiency; they will surpass it. For example, in the fish industry, once self-sufficiency in the fisheries has been achieved, the country is able to export fish, thus adding to the foreign exchange. Farm broadcast programs do not merely encourage people to cultivate fish for individual consumption, but attempt to motivate them to cultivate fish as a source of income.

A program entitled "Tarun Taranga" (Youth Wave) is also included in the regional farm broadcast transmissions, aimed at creating an interest among the young people and inspiring them to participate in the agricultural development program. Since malnutrition is considered to be a national problem, a program on nutrition is broadcast every two weeks. In addition, programs on cooperative farming and farm bulletins from the Dacca, Chittagong, and Rampur stations are aired early in the morning to remind farmers of the day's agricultural operations.

RESULTS:

In order to obtain organized feedback from the target audience, radio clubs for farmers have been formed in each area of the regional stations. In addition, a one-band transistor radio has been distributed to each of the clubs to enable its members to listen to the farm broadcast programs and provide the radio stations with feedback. The number of clubs is limited, however.

To date, the impact of farm broadcasting programs has been assessed primarily through listeners' letters and occasional feedback from farmers' clubs. However, Radio Bangladesh requested the National Broadcasting Academy in Dacca to undertake a study on the evaluation and impact of the farm broadcast programs, the results of which will be released this year. The evaluation entails a study of six districts, each of which is reached by one of the six regional stations in Bangladesh. The study will determine the characteristics of the target audience, their interests and problems, their listening habits, and their reactions to some of the radio programs. Radio Bangladesh expects that the results of this study will enable it to improve the farm broadcasts and further meet the needs of its audience.

The farm broadcast programs of Radio Bangladesh have contributed significantly to informing and motivating farmers in the use of modern agricultural practices.

OF NOTE:

- Nearly 50 percent of the total population of Bangladesh are women, most of whom live in villages and constitute a strong agricultural work force. Since many of the women are illiterate, Radio Bangladesh schedules programs to educate them on better and more productive living. A 10-minute period is reserved for women in the regional farm broadcasts, and an attempt is made to create a sense of awareness among them.
- When scheduling the regional farm broadcasting programs, particular attention is given to the needs of the farmers. Programs by extension workers, which are based on farmer feedback, are given priority in the schedules.
- Farm broadcasting programs are not confined to the studios. Microphones are taken into the fields to record farmers' achievements as well as their problems.

REFERENCES:

"Farm Broadcasting in Radio Bangladesh," by S. A. Shahadat, Director, Farm Broadcasting Radio Bangladesh. Combroad, December 1982.

Clearinghouse on Development Communication
December 1983

LEFATSHE LA RONA — OUR LAND

Botswana

TARGET AUDIENCE:	The adult population of Botswana
OBJECTIVES:	To involve the public (particularly its rural constituents) in learning about and commenting on land-use policies
MEDIA:	Radio, print, flipcharts, and interpersonal communication
DONORS/SPONSORS:	Botswana's Ministry of Local Government and Lands and other national governmental agencies, with financial assistance from the British Government
DURATION:	Begun in 1975; carried out primarily in 1976; follow-up stage completed in 1977
CONTACTS:	Mr. B.K. Temane and Mr. D. Noppen, Ministry of Local Government and Lands, Private Bag 006, Gaborone, Botswana; Ross Kidd and Alan Etherington, Department of Adult Education, OISE, 252 Bloor Street West, Toronto, M5R 1B2, Canada; and David Crowley, National Youth Bureau, 17/23 Albion Street, Leicester, LE1 66D England

DESCRIPTION:

LEFATSHE LA RONA — Our Land, a project of Botswana's Ministry of Local Government and Lands, has been both an experiment in participatory decision-making and an attempt to solve a land-use problem at the heart of a semi-arid country's economy. Botswana's traditional tribal grazing system — a series of White Papers issued by the government between 1971 and 1975 revealed — could not long withstand pressures exerted by increases in human and livestock populations. Under excessive strain, the communal grazing areas adjacent to villages were plagued by soil erosion, and uncontrolled grazing near surface water was contributing to the deterioration of the veld. At the same time, policies governing well-drilling tended to work against smaller cattle owners (as opposed to wealthy individuals). By 1975, the national government had identified means of reversing land degradation. It had developed a land-management policy based on the practices of stock controls, fencing, paddocking, early weaning, salt-and-bonemeal feeding supplementation, and rotational grazing. But it was also determined to preserve some of the values and features of the traditional land-tenure system and to protect the interests of those who own few or no cattle. Accordingly, it launched an educational and consultative campaign to explain and to get feedback on land-zoning policies and other aspects of the land-management program.

The "Public Consultation" staged by the national government took place in four phases. The first consisted of a two-month national speaking tour in the autumn of 1975. The President and his ministers attended more than 100 *Kgotlas* (community meetings) during this period, explaining public policy and fielding questions from villagers. The second phase, July of 1975 to February of 1976, comprised briefings and seminars for government officers and others. The third phase, the Radio Learning Group Campaign, was trial-run in December of 1975 and conducted on a full scale in 1976. The final phase, the analysis and use of the public responses culled during the Radio Learning Groups, took place in 1976 and 1977.

The Radio Learning Group Campaign involved a pilot project, leadership courses (held in May of 1976), materials preparation (from October of 1975 to March of 1976), radio broadcasts (from June through July of 1976), and follow-up radio programs based on responses to the earlier broadcasts and aired from July to December of 1976. A limited amount of vital information on the land-zoning proposals and their implications for people in various parts of the country was broadcast during this campaign to roughly 3,200 listening groups averaging 16 members each. Every group had a discussion leader recruited and trained by extension workers (in agriculture, community development, and health) who functioned in extension teams. Each group met twice a week for five weeks to discuss the broadcasts and the specially prepared materials (flipcharts, an illustrated popular version of the White Paper on zoning policy, pictures, and study guides). After each program, the group leaders mailed a report on the group discussion to the campaign organizers, who used the information to work out land-use plans and prepare "answer" programs for broadcast.

RESULTS:

Original plans called for the organization of between 4,000 and 5,600 groups, while 3,510 were actually established. The attendance record was comparably positive, with one participant in five attending all meetings and each listening-group member attending an average of six. According to one estimate, one adult in six was reached directly by the campaign.

The desired outcome of *LEFATSHE LA RONA*, a national consensus on the need for new land-use policies and on the most effective ways for implementing such policies, appears to have been achieved. The Public Consultation (defined in the campaign as "government and people discussing together") revealed that the people of Botswana recognize the problem of overgrazing and see the presence of too many cattle as a major cause, that a large majority favored (though hesitantly) the principle of granting exclusive leasing rights to grazing land and also wanted such grazing land situated in the sand-velds where population density is low. About the formation of ranching groups, the people of Botswana are uncertain, though they acknowledge that this is a major mechanism by which a "small man" could benefit. Most RLG members opposed the setting of limits on the number of cattle that an individual farmer could hold. Most were also hesitant about adopting expensive, modern ranching methods but were interested in learning more about them and having access to the financing for them. These and other findings are being used by the national government and the regional Land Allocation Boards on an *ad hoc* basis in decision-making. They have not been used to form laws or nationwide policies, since conditions and listening-groups responses varied so much among Botswana's 11 districts.

OF NOTE:

- The main issues covered in the questionnaires used to gather feedback were grazing rights, zoning, the importance to present and future generations of caring for the land and respecting its limits, water rights, fencing, conservation in general, resettlement schemes, and the possibility of establishing farmer's groups.
- Radio was selected as the primary medium because almost four-fifths of the adult population of Botswana cannot read or write.
- Although the official national language, Setswana, was used for radio broadcasts, some adults intended to benefit from the radio programs don't speak Setswana. Other problems related to the translation of English-language materials into Setswana were also encountered.
- One observer of the interministerial media campaign has raised the possibility that the campaign was too intense, that "media overkill" came into play.
- Some members of the Radio Listening Groups were openly suspicious of the government's interest in their opinions. "Why, they asked," hasn't the government consulted us about other matters of public interest?"
- The cattle industry is the mainstay of Botswana's economy.
- Report forms returned to project headquarters were tabulated and analyzed by computer.

REFERENCES:

- "*Lefatshe La Rona* — Our Land: The Report on the Botswana Government's Public Consultation on its Policy Proposals on Tribal Grazing Lands," Ministry of Local Government and Lands, Gaborone, September 1977.
- "*Lefatshe La Rona* — Our Land: An Explanatory Note," Ministry of Local Government and Lands, Gaborone, March, 1978.
- "Technical Notes 1-5 on the TGLP Campaign," Alan Etherington, Botswana Extension College, 1977 and 1978.
- "Botswana's Radio Learning Group Campaign," David Crowley and Ross Kidd, International Extension College, England, 1976.
- Lefatshe La Rona* Radio Learning Group Campaign of Botswana," Paul Hurly, abstracted in *Communications for Social Development in Africa*, edited by John Balcomb, UNICEF, Nairobi, 1977.

Clearinghouse on Development Communication
October 1978

SCHOOL-ON-THE-AIR India

TARGET AUDIENCE:	Indian farmers
OBJECTIVE:	To impart a systematic knowledge of agricultural science to farmer listeners via radio broadcasts
MEDIA:	Radio, supplemented by written correspondence
DONOR/SPONSOR:	All India Radio
DURATION:	Initiated in August 1975; ongoing
CONTACT:	Dr. Pradip K. Dey (Project Director), Farm Radio Officer, All India Radio, Calcutta, India

DESCRIPTION:

In 1975 All India Radio developed a strategy to deal with the complex problem of delivering, in a short period of time, modern farming information systematically through channels acceptable to the rural farming population of West Bengal. The radio station chose literate farmer listeners with access to radios as the target audience for a broadcast series on agricultural science information. Its staff assumed that if systematic knowledge of agriculture were imparted to the farmer listeners, they would become "contact farmers" and disseminate modern agricultural innovations to villagers hitherto incapable of interpreting, or without access to, complex information on modern agriculture.

The *School-on-the-Air* for farmers broadcast six courses between late 1975 and early 1976. Each course consisted of five half-hour lessons. The curriculum was planned with the help of the Agricultural Department of the State Government of West Bengal, which also selected the broadcast trainers or teachers.

Trainers prepared the lessons and read them over the radio every Sunday between 7:00 and 7:30 p.m. The delivery pace was slow so the farmer listeners could write down important points. Key points, as well as unit numbers and measures, were repeated several times throughout the broadcast. At the end of each program, questions were broadcast. Before the listeners mailed responses to these questions to the radio station, their requests for clarification or points broadcast during the program were answered. Trainers marked each paper, and at the end of the year the radio listener received a certificate of appreciation along with his grades.

RESULTS:

Although All India Radio feels that a large number of farmers may have benefitted from the broadcast programs, only 114 actively participated in the correspondence course during the first "school year." These trainee listeners were surveyed at the end of the training session to ascertain their interests and expectations, and their potential for becoming contact farmers. Most participants, the survey showed, were between the ages of 20 and 29, educated at the high school level, and of middle income status. About 53 percent were closely associated with cultivation, while 35 percent were students or teachers. Most reported listening to the lessons on their own radios, and most were prone to greater social participation after hearing the broadcasts.

Overall, participants generally took a total of three out of the six courses offered during the training session. Most listeners were interested primarily in courses on the cultivation of wheat and summer paddy, two widely cultivated and remunerative winter crops in West Bengal. They reported that their strongest motive for participating in the course was to learn more about scientific farming, but that the desire for realizing increased profits came second.

After the first-season responses were analyzed by members of the Department of Agriculture of West Bengal, the 1976-77 School-on-the-Air was altered to stress the most popular subjects, and broadcast times were changed. The 1976-77 courses subsequently drew a higher number of active participants (155-180, depending upon the course). According to the project director, the evaluation showed that the likeliest participants in future farmers' School-of-the-Air courses will be prospective farm leaders — potential contact farmers.

OF NOTE:

- To measure listeners' potential for becoming contact farmers, researchers compared the participants' socio-personal characteristics with those of potential farm leaders identified by past investigators.
- Studies do not confirm that feedback from listeners altered future broadcasts, nor that broadcast trainers directly asked radio listeners to reach out to disadvantaged farmers with the innovative broadcast information.
- While farmers originally listed making monetary gains as the second most important reason for listening to the radio broadcasts, a follow-up study showed that expectations for realizing such profits dropped during or after the course.

REFERENCES:

- "Agricultural Broadcasting: A Novel Approach in Calcutta," Pradip K. Dey, *Combroad*, No. 34, January-March 1977.
- "Identification of Participants of the School-on-the-Air for Farmers," *Indian Agriculture*, Vol. 20, No. 2, 1976.

Clearinghouse on Development Communication
June 1977

THE TRAINING COMPONENT OF THE THABA BOSIU RURAL DEVELOPMENT PROJECT

Lesotho

TARGET AUDIENCE:	Agricultural agents who market improved seeds and fertilizers in the Thaba Bosiu area
OBJECTIVES:	To provide job-related training and information to Village Distribution Point Agents
MEDIA:	Print, radio, demonstrations, role-playing, and interpersonal communication
DONORS/SPONSORS:	The Government of Lesotho, the World Bank, and U.S. AID
DURATION:	Begun in 1976; ongoing under Ministry of Agriculture auspices
CONTACTS:	Paud Murphy, HECG, 29 Lower Baggot Street, Dublin 2, Ireland; Ken Tseko, Lesotho Distance Teaching Center, P.O. Box 781, Maseru 100, Lesotho; Lipholo Makhetha, LDTC, P.O. Box 781, Maseru 100, Lesotho

DESCRIPTION:

The Thaba Bosiu Rural Development Project (TBRDP) was established by the Lesotho Government with assistance from the World Bank and U.S. AID in 1973. It operates in a 121,000-hectare area containing 17,000 farm households near Thaba Bosiu Mountain (the summit on which the first King, Moshoeshe, held out against the Boers and the Zulus). The objectives of the project are to control erosion and to increase crop production, to encourage integrated farming, and to provide data for use in preparing similar projects in other areas. Project activities have included road-building, conducting agricultural research, creating credit programs to help farmers buy seed and fertilizer, establishing farm-supply stores and an asparagus-canning factory, and circulating timely agricultural information to farmers.

In late 1975, *TBRDP* asked the Lesotho Distance Teaching Center (an organization founded in 1974 to make radio-mediated and correspondence courses and various self-instruction materials available to out-of-school learners and to offer technical services and expertise to other educational organizations in Lesotho) to collaborate in the design and production of materials for training Village Distribution Point Agents (*VDPAs*), the villagers who sell the project's supplies for a 3 percent commission. LDTC subsequently conducted a preliminary survey of the agents' work and proposed a training package to *TBRDP*. After some discussion, the two bodies decided to produce illustrated handbooks in English and Sesotho, posters, newsletters, and radio spots for use in training three types of clients: agents whose present skills are inadequate and who are thus not meeting performance standards, competent agents who would perform better if given the chance to master new skills and knowledge, and new recruits. During a five-day training course in Maseru, these groups received illustrated handbooks (for at-home reading) that contain descriptions of the agents' duties and fine points on record-keeping. The second class of trainees also received over a half-year post-training period six issues of a newsletter for their own use and multiple copies of a single poster to distribute. At the same time, they were exposed to eight 60-second radio spots that were broadcast regularly over Radio Lesotho.

An evaluation in 1976 of the work of the Village Distribution Point Agents revealed that the training had not had the desired impact, ostensibly because the original training proposal had not been carried out fully. Accordingly, evaluators recommended that training materials be further integrated, that the training course make extensive use of role-playing activities designed to duplicate on-the-job problems and encounters, and that the handbook play a greater part in training sessions. An additional change proposed for later courses was the involvement of LDTC staff in planning, setting objectives, and working with the course organizers from *TBRDP*. The main objective of this collaboration would have been to prepare for the eventual withdrawal of LDTC expertise when *TBRDP* staff felt satisfied with both the training package and their own ability to use it. As it happened, LDTC assumed the role of materials producer and *TBRDP* of materials distributor: the goal of integrating these two functions was never realized.

By 1978, the training courses had been phased out, although many *TBRDP* staff members have been recruited by the Ministry of Agriculture to continue some of *TBRDP's* programs.

RESULTS:

An informal evaluation conducted by staff from the Lesotho Distance Teaching Center in 1976 revealed that about half the agents had read the entire handbook and half had read parts of it. Yet, only 6 of the 15 quizzed were capable of locating specific sections in the handbook and thus of using it effectively as a reference work. The newsletter had a warmer reception, with three-fifths of the respondents reading it word-for-word and keeping it for future reference. The poster, it seems, had not been put up in most offices, in some cases because it had not been received. Of the nine agents asked if they had tuned into the previous week's program-related radio broadcast, six answered yes but were hard-pressed to recall much information from the show. Over all, responses to questions on particular agricultural practices and information were divided, and performance on a test designed to gauge the VDPA's knowledge of standard forms was poor. Most but not all agents appeared to understand the procedures for extending credit and for receiving consigned goods.

A comparable test was given by LDTC staff to the agents who completed the *TBRDP* training course in January 1977. While only three out of the 16 agents who had taken the test a year before had performed at high levels, 13 of the 16 taking the test in 1977 scored over 80 percent. The difference between these two sets of results is attributed by the curriculum designers to the effect of using mixed media, especially the combination of demonstrations and exercises. Commonly made errors, at the same time, appeared to reflect a lack of arithmetical skills or capabilities that may indicate improper employment-screening practices and not necessarily training failures.

OF NOTE:

- Part of LDTC's role has been to force the various divisions of *TBRDP* to clarify their procedures. Another is to act as a liaison between project administrators and the Village Distribution Point Agents, spelling out the VDPA's duties and problems as part of an attempt to keep paperwork at a minimum. LDTC accepted these responsibilities reluctantly, questioning whether such matters should be left to an outside agency.
- A continuing problem besetting those in charge of the training course is materials distribution.
- Other than training needs, which in fact are accorded relatively low priority within the *TBRDP*, the Village Point Distribution Agents have other basic needs. They need ways, for example, to deal with the problems associated with taking responsibility for large sums of money, with overseeing rat-control measures, with minimizing thefts from the project stores, and with accounting for equipment and work clothes.
- Shifting responsibility for materials design from the *TBRDP* staff had advantages and disadvantages. The main disadvantage, a lack of commitment by *TBRDP* field staff, can probably best be combated by keeping the staff thoroughly briefed.
- According to one evaluator, poor coordination among the divisions of *TBRDP* that were responsible for training VDPAs reduced the effectiveness of the course and the support scheme.

REFERENCES:

- “Evaluation of a Training Course for VDPAs of the Thaba Bosiu Rural Development Project,” Lesotho Distance Teaching Center, January 1978.
- “Training Village Distribution Point Agents,” Lesotho Distance Teaching Center, undated.
- “Evaluation of the TBRDP/LDTC Training and Support Program for VDPAs,” Lesotho Distance Teaching Center, December 1976.

Clearinghouse on Development Communication
January 1979

AGRICULTURE

ACHIKUMBI PROGRAM Malawi

TARGET AUDIENCE:	Malawi farmers
OBJECTIVES:	To demonstrate better agricultural practices to individual groups of farmers using mass media programs.
MEDIA:	Radio, print, interpersonal communication, film, puppets
DURATION:	1958; ongoing
DONORS/SPONSORS:	The Extension Aids Branch of the Malawi Ministry of Agriculture; Unesco
CONTACT:	Ministry of Agriculture, Extension Aids Branch, P.O. Box 594, Lilongwe, Malawi

DESCRIPTION:

Malawi's President for Life has always believed that his country's "gold lies in its soil." Since it gained independence from Britain, Malawi's government has focused resources on rural development, making Malawi an exporter of groundnuts, corn, and tobacco. Prior to 1958, the Ministry of Agriculture's Achikumbi (progressive farmer) Program consisted mainly of individual or group visits to farmers by extension agents and of short term training at day or residential centers.

In an attempt to increase the effectiveness of the extension programs, the "Extension Aids Branch" (EAB) was created in 1958 to support the agricultural extension service with a variety of media. Extension agents now use demonstration plots to illustrate better agricultural practices. A fleet of mobile cinema vans covers rural areas showing films produced by EAB that explain improved agricultural practices. These vans also carry educational puppet shows to farmers. Unlike some other agricultural extension programs, Malawi's agents do not handle credit or the sale of seed and/or fertilizer that is promoted in the educational messages. These activities are carried out by the Credit Section of the Department of Agriculture in the Ministry.

In 1960, the Government began two weekly radio programs to encourage rural people to increase farm production with modern farming methods and thereby improve rural living standards. This program is now the responsibility of the EAB which currently produces six programs totaling 4 hours of broadcast time. The broadcasts are written and produced by EAB staff and recorded at a studio in Lilongwe. Broadcasters are extension workers trained in radio techniques. A woman producer concentrates on women's farming needs. The six programs are: Farm Forum, Modern Farming, Cotton, Farmer Request Program, Farmer Notebook, and O'Phiri, a farming family serial.

EAB also publishes a 16-page bimonthly magazine for farmers, Za Achikumbi, which has a regular print run of 32,000 copies. EAB also prints books and other informational materials and pamphlets that are distributed to farmers through the field extension staff.

RESULTS:

A recent evaluation of the EAB's programs showed that they succeed in reaching farmers at lower cost than the more traditional programs. Radio was shown to be the most economical medium to reach the largest number of farmers. Though more than 65% of farmers surveyed identified their extension agent as their primary source of information, significant numbers of farmers learn from radio and the mobile cinema van programs. The number of broadcasting hours of agricultural radio programming has remained constant over the years.

The relative cost per farmer contact per medium used is as follows:

\$30	residential training
\$21	agricultural extension agents
\$4	day training
\$.17	film (mobile van)
\$.08	puppets (mobile van)
\$.004	radio broadcast

Studies by the EAB's Evaluation & Action Research (EAR) Unit have shown that many farmers either are already familiar with the information the EAB is disseminating or they don't have access to the proper tools and inputs mentioned in the messages. However, the EAR Unit has also found that farmers do recall those radio and film messages that are both innovative and appropriate to their needs. Therefore, message pre-testing, as well as relating EAB's mass media with the work of extension agents and agricultural research, would most likely increase the impact of the EAB and thus accelerate the development of Malawi's economy and the well-being of its citizens.

OF NOTE:

- The EAB's film unit produces a number of films annually, most of which cover single topics. Farmers rather than actors demonstrate agricultural techniques in the national language of Chichewa, making the films more convincing for viewers.
- The annual audience for puppet shows was calculated at one to two million people per year, with a large proportion of that figure being children.

REFERENCE:

"Basic Education and Agricultural Extension Costs: Costs, Effects and Alternatives," Hilary Perraton, Dean T. Jamison, Janet Jenkins, François Orivel, Laurence Wolff. World Bank Staff Working Papers, No. 564.

Clearinghouse on Development Communication
May 1986

MALI LIVESTOCK II PROJECT

Mali

TARGET AUDIENCE:	Malian farmers and herders
OBJECTIVES:	To introduce conservation techniques and range-management practices and to improve breeding and production techniques in order to raise the nutritional and economic status of Malians and generate foreign exchange
MEDIA:	Radio, cassette tapes, audio-visual materials, and interpersonal communication
DONORS/SPONSORS:	Agency for International Development and the Government of the Republic of Mali
DURATION:	Preliminary phase begun in April 1977; ongoing through June 1979; 2nd phase planned for 1979-1981
CONTACTS:	Boubacar Sy, Director General, Office Malien du Betail et du Viande (OMBEVI), B.P. 1382, Bamako, Mali; Benedict Tisa, 45 Haddon Avenue, Westmont, NJ 08108, USA; Almouzar Maiga, Thurston F. Teele, or Philip W. Moeller, c/o Chemonics, International Consulting Division, 1120 19th St., N.W., Washington, D.C. 20036; Robert Reeser, Bamako (ID), Department of State, Washington, D.C. 20520

DESCRIPTION:

Negotiations between the U.S. Agency for International Development and the Malian Government on the *Livestock II Project* got under way in drought-ridden Mali in early 1977. More than a relief effort, the project they designed was to provide a basis for self-sustaining agricultural development and to reduce the suffering associated with resettlement schemes. Its specific objectives are to promote the adoption of range-management, livestock-production, and agricultural practices that will increase productivity on existing croplands and enable Malians to farm land that is presently uncultivated. Its three fronts reflect three different but mutually reinforcing approaches to problems that the project designers feel are economic, social, and technological: it has (1) a program in the Dilly region that is concerned with developing, testing, and applying new techniques for dealing with dry lands and livestock problems; (2) a program and facilities in Bamako for training extension workers; and (3) in the southernmost region a "new lands" program focused on the development of underutilized lands (a chief feature of which is tset-se fly control). At the moment, the project staff includes twelve long-term specialists and a variety of short-term consultants.

The training component of the *Livestock II Project* may eventually encompass programs for five different kinds of audiences: existing cadres of livestock extension workers, recent college-level graduates of the *Institut Polytechnique Rural* (IPR) in Katibougou, graduates of IPR's middle-level program in Bamako, graduates of the *Ecole des Infirmiers Veterinaires*, and eighth or ninth-graders from non-technical schools. The courses for these groups are designed to prepare enrollees to assume greater responsibilities — the graduates of the *Ecole des Infirmiers Veterinaires*, for example, will become more well-rounded livestock and range-management advisors, and the youngest trainees will become village-level change agents. Some trainers and administrators are to receive initial training in the United States, and refresher courses are to be conducted periodically at the Sortuba project center for others.

The project's communication specialist, whose full-time services will be required for at least two years, assumes a battery of responsibilities. Some of these tasks are ongoing, while others relate to specific stages of the project's development. Open-ended activities include materials production, facility and equipment maintenance, and coordination of the center's business with that undertaken in the field in Dilly. Sequential activities comprise reviewing available production resources, procuring equipment, field-testing materials (charts, tapes, slides, etc.), stockpiling audio-visual aids, and conducting a thorough evaluation of the communication component at the close of the project's second year in 1979. Perhaps most important, the communication specialist will train change agents in communication methods and in the use of A-V materials in extension work.

RESULTS:

Still in its preliminary phase, the project has not been evaluated. The results of pre-project research, however, have revealed many social and economic factors that are sure to determine the eventual success or failure and the duration of the project.

The pre-project analysis of socio-cultural factors (part of which consisted of personal interviews conducted in six villages with different ethnic identities) indicated that the habits and the needs of the villagers range widely. Some villagers are migratory, some are not. Some are dependent solely upon livestock or agriculture for a living, while some live in mixed economies. At the same time, interaction and cooperation among the many ethnic groups appears to be extensive. Investigations of socio-cultural factors (including human and animal disease patterns, nutritional status, range-management techniques, and knowledge of such subjects), though fairly thorough, were impeded by language differences and by researchers' use of some terms unfamiliar to rural Malians.

The chief findings of the consultant who examined the communication component of the project — that new visual media will have to be introduced slowly and via the agricultural extension agents, that project workers can take very little for granted with respect to the villagers' exposure to modern media, that indigenous media and traditional performers should be used, that the literacy rate is low among the target population, and that the credibility of the staff promises to be a problem and a challenge — show that Mali's needs and problems are typical of those of many developing countries.

OF NOTE:

- Most of the people trained as change agents are recruited from the areas in which they will later work, and many are already in government employ in agencies other than OMBEVI.
- Visual aids are not used solely as teaching devices. They are instrumental in data-gathering, eliciting feedback, and winning local support for project activities.
- OMBEVI, FAO, Radio Mali, and *Alphabetization Functional* collaborate in the operation of the *Mali Livestock II Project*.
- With tape-recorders, one consultant suggested in a first-term report, change agents could help establish an oral library, contribute more significantly to evaluation and monitoring activities, and learn at home at self-selected paces.
- A pre-project survey on women's contribution and role in agriculture was conducted to help project planners focus on the needs of rural Malian women.
- Many Malian staff-members have received overseas training in such countries as Cuba, the United States, and Germany. According to one consultant, these Malians have a keener understanding of the "expatriot mentality" than most expatriot staff-members have of local culture.
- Even before the visual aids used in this project were pre-tested, the target audience was surveyed to determine how familiar and receptive it was to photographs and drawings as media. In general, people responded most positively and actively to realistic pictures of familiar activities, objects, and settings.
- Each technical-assistance specialist has a Malian counterpart who will eventually take over his or her job.

REFERENCES:

"Final Report: Livestock and Ranch Development in the Dilly Area — Media and Communications Aspects," Benedict Tisa, Chemonics, January 1978.

"Final Report: Livestock and Ranch Development in the Dilly Area — Sociological and Communications Aspects," Walton Johnson, Chemonics, August 1977.

Assorted unpublished project documents, unsigned and undated.

Clearinghouse on Development Communication
April 1978

RADIO HUAYACACOTLA

Mexico

TARGET AUDIENCE:	<i>Campesinos</i> and other inhabitants of a 177,000-square-kilometer region in eastern Mexico (roughly 11 million people)
OBJECTIVES:	To stimulate self-reliance, self-expression, cultural integration, and agricultural productivity
MEDIA:	Radio, print, tape recorders, audio-visuals, and interpersonal communication
DONORS/SPONSORS:	Sistema Educativo Radiofónico (through 1973); Fomento Cultural y Educativo (since 1975); U.N. Food and Agriculture Organization; Ashraf Pahlavi Foundation International (Paris)
DURATION:	Begun in 1965; ongoing
CONTACTS:	Information Officer, FFHC/AD, U.N. Food and Agriculture Organization, 00100 Rome, Italy; R. Etemad, Ashraf Pahlavi Foundation International, 41, rue Dauphine, 75006 Paris, France

DESCRIPTION:

Radio Huayacacotla, in operation since 1965, represents an attempt to use "two-way" radio as a stimulus to self-development. Unlike standard listening forums, the project enlists the active participation and cultivates the continuous feedback of the audience, most of which is engaged in agriculture and nearly a third of which is composed of illiterates. Long-term project goals are both practical and idealistic: encouraging self-reliance and self-expression; fostering the social integration of the disenfranchised by making them aware of the economic and social barriers they must work against; providing practical information related to social problems and income-generating activities; promoting activities aimed at raising living standards; and providing recreational opportunities and entertainment. Begun under the auspices of *Sistema Educativo Radiofónico*, the project was taken over in 1975 by *Fomento Cultural y Educativo*, an organization dedicated to improving the lot of marginal socioeconomic groups.

The three components of the *Radio Huayacacotla* project are the radio station itself, the work team (a coordinator, an agriculturist, a communications officer, three field workers, and two radio operators), and an advisor affiliated with the Education Research Center in Mexico. The project's radio programs, broadcast from 4 p.m. to 8 p.m. daily, include news, agricultural education segments, entertainment, and useful information on a variety of subjects. The social problems addressed in programs are selected and developed with the audience's help: listeners write to express needs, complaints, or curiosity. Topics explored in such problem-oriented broadcasts include men's respect for women, the social implications of illiteracy, and the roots of alcoholism. The agricultural programs are keyed to local conditions — no easy task since the broadcast sphere encompasses a variety of climatic and soil conditions. They are also linked to timely demonstrations performed by agronomists on small experimental plots located in *Huayacacotla*.

Three pilot schemes related to the agricultural broadcasts were recently established in a preliminary attempt to increase the project area and the effectiveness of agricultural education. Primarily information campaigns, the pilot projects are aimed at helping *campesinos* boost crop yields by adopting new techniques. The schemes are designed to promote fruit and vegetable production in particular and entail efforts to form farmers' cooperatives to expedite dried-fruit production and marketing.

RESULTS:

Available information makes no mention of either baseline surveys or formative evaluation conducted in conjunction with *Radio Huayacacotla*. Project documents, however, do contain testimonies to voluminous mail received from listeners, to an extraordinary vitality and political consciousness among project participants, and to the replicability of the project elsewhere in Mexico. In addition, the project program was broadened in 1975 primarily because the positive impact of the first decade of operation was deemed significant.

OF NOTE:

- Broadcasters and other workers associated with *Radio Huayacacotla* conduct their own informal studies of local social and economic problems to make sure that they do not lose sight of the plight and perspectives of the listening audience. They also live in the area they serve.
- All members of the work team are Mexican nationals.
- The geography of the broadcast zone includes highlands, forests, plateaus, mountains, and coastal regions. Each of the three pilot agricultural projects is situated in a different climate and at a different altitude.
- The zone covered by the project includes 25 percent of Mexico's towns. About one-eighth of the zone's population is made up of indigenous peoples, nearly all of which speak Spanish as well as their own Indian language.
- Crops grown in the project area include maize, beans, chili, barley, wheat, alfalfa, lettuce, carrots, potatoes, timber, coffee, tobacco, sugar cane, and fruit. Agricultural development in the area has been hampered by chronic shortages of insecticide and fertilizer.
- Agricultural inputs donated by aid agencies and foundations include a fruit dehydrator, seeds, fertilizers, pumps, and insecticides.

REFERENCES:

Unpublished project document, Ashraf Pahlavi Foundation International, Paris, cover letter dated January 1979.

"A Rural Radio Programme for Mexico," Beatriz Bracco, *Ideas and Action*, FAO, No. 199, 1977.

Clearinghouse on Development Communication
April 1979

(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

BARANI PROJECT

Pakistan

TARGET AUDIENCE: Farmers in the northern portion of two provinces in Pakistan, Punjab and Northwest Frontier

OBJECTIVE: To introduce and promote the adoption of income-increasing crops and practices

MEDIA: Interpersonal communication, posters, print, radio, slides, film

DONORS/SPONSORS: Pakistan's Ministry of Agriculture; U.S. Agency for International Development (AID); World Bank

DURATION: 1976 - 1979

CONTACTS: Ashraf Hussain, Assistant Publicity Director, Rawalpindi DDA, Ministry of Agriculture, Rawalpindi, Pakistan; Gerald R. McKay, 2231 Hendon Avenue, St. Paul, Minnesota 55108, USA

DESCRIPTION:

In Pakistan there are approximately 40 million acres of unirrigated (barani) land with soil and slope suited to tillage, but only eight to ten million acres are tilled in an average year. Evidence from experience elsewhere, and limited research in Pakistan, suggested that much a higher yield from field crops would be possible by changing current farming technology. It was assumed that higher yields, in turn, would improve farm incomes as well as rural family living, on the small barani farms. In the Barani Project the desired result was the increased production of wheat, maize, and groundnuts (peanuts). Barani literally means "rainfed" and the term identifies the northern portion of two provinces, Punjab and Northwest Frontier, where farmers raise crops with an annual rainfall of 25 to 50 cms. without the benefit of irrigation. Launched in 1976, the Barani Project was sponsored by the U.S. Agency for International Development (AID) with the Government of Pakistan. The contractor provided technical assistance and support the project. A Barani Project Director was provided by the Government of Pakistan in each of the two provinces (at Rawalpindi and Peshwar), with supporting project personnel, offices, and logistic support.

A major problem faced by project members was making information available to the farmers living in more than 10,000 villages in the Project areas. During the first two years of the project the staff conducted demonstrations with more than 2,000 plots and collected data on fertilizer rates, pest control, harvesting methods, and yields. But the information was not generally available to farmers who could use it. Farmers in the Barani areas were getting wheat yields averaging 1,260 kilograms per hectare while a series of farm demonstration plots under controlled conditions averaged 2,232 kg./ha. Demonstration plots of maize showed similar increases. A few farmers had learned about fertilizing and other recommended agricultural practices, but most farmers were using the same methods that had been used for centuries. Hence, a necessary part of the project was a strong communications program with printed and other educational materials.

The Barani staff first conducted a study to determine where and how farmers were currently getting information and the potential for using radio, television, newspapers, film, and other media. Radio had strong possibilities; there were three stations that broadcast to all of northern Pakistan. Television and newspapers, on the other hand, would be of little use since they generally reached only the large cities. Single page fact sheets, where they had been tried, had been accepted. However, most of the agricultural research information had not been made available to farmers in any form.

The Barani Project utilized the Agricultural Extension Service (part of the Ministry of Agriculture), and it was the Extension Field Assistants (FA's) who were responsible for bringing information to the farmers. Each FA worked directly with from 200 to 500 farmers. To make the distribution of information and materials effective, the FA's and their supervisors were trained. The training and distribution plan was modeled after the Benor system of extension education. The plan that Benor (a World Bank agricultural advisor) developed had two important aspects: 1) presenting the information in small units; and 2) making the presentations at regularly scheduled and well-timed intervals. Using this system as a base, four information units were planned to implement the program: 1) four series of single-page fact sheets on wheat, maize, groundnuts, and control of rodents and birds; 2) a series of posters based on the fact sheets; 3) a series of radio scripts summarizing each fact sheet; 4) a set of slides to correspond with each fact sheet. These materials were put into packages, each containing a single-page fact sheet, a corresponding poster, set of slides, and radio script. In addition, one 16mm color film about 20 minutes long was made to show recommended practices in raising wheat. Since most villages did not have electricity, however, use of the film was limited to the larger centers.

RESULTS:

According to an impact evaluation study made on the Barani Project, 75 percent of the farmers who allowed trial plots on their land became adopters of the improved technology and 49 percent of the farmers who did not participate became adopters.

Another accomplishment of the project was an improvement in the in-service training of field staff of the Agricultural Extension Service and in their subsequent outreach to farmers. This was done by upgrading the quality of training through the use of relevant films, slide series, crop production manuals, and other visual aids.

The major types of information farmers reported receiving included a) land preparation and cultivation methods; b) new seeding and fertilizing methods; c) weeding, pesticides, and insecticides; and d) well irrigation, fruit and vegetable cultivation, and maintenance of animals. Major sources of information were other farmers, agricultural extension and other officials, and radio agricultural programs.

OF NOTE:

- Farmers were considered "adopters" if they used the new varieties of high yielding (HYV) seeds and new chemical fertilizers.
- The willingness of farmers in different areas to adopt new practices was strongly influenced by several factors: 1) Rainfall - Higher adoption rates were directly related to higher amounts of rainfall, since the farmer had less risk with more rain; 2) Age - Older farmers were more traditional and hence less willing than the younger farmers to change their methods; 3) Education - Farmers who were more educated could better understand how they would benefit from adopting the new techniques.

REFERENCES:

"Communicating With Agricultural Producers," by Gerald R. McKay in Agribusiness Worldwide, Vol. 1, No. 3, April/May 1980.

Pakistan Barani Project Summary Report: Nos. 1 and 2 by Clarence J. Miller, No. 4 by Gerald R. McKay, No. 5 by Lawrence Ulsaker, and No. 6 by William D. Burgess, Jr. Experience, Inc., 1978-1979.

Clearinghouse on Development Communication
December 1983

MASAGANA 99

Philippines

TARGET AUDIENCE:	Rice producers in 59 Filipino provinces (approximately 900,000 farmers, according to official estimates)
OBJECTIVES:	To increase rice yields by supplying farmers with credit, loans, agricultural inputs, and timely information on agricultural concepts and practices
MEDIA:	Radio, comics, booklets, flyers, bulletins, vernacular magazines, newspapers, posters, TV, and interpersonal communication
DONORS/SPONSORS:	The National Food and Agriculture Council of the Philippines (an organization composed of 17 Filipino government agencies and banks); the U.S. Agency for International Development; and the International Rice Research Institute
DURATION:	Pilot project and research conducted from 1971 to 1973; implementation phase begun in 1973; ongoing
CONTACTS:	Dr. Arturo Tanco, Secretary of Agriculture, Quezon City, Philippines; Domingo F. Panganiban, Director, National Food and Agriculture Council, Quezon City, Philippines; J.D. Drilon, Jr., Director, Southeast Asian Regional Center for Graduate Study and Research in Agriculture, U.P. at Los Baños, College, Laguna, Philippines; Kenneth F. Smith, OHP USAID Korea, c/o U.S. Embassy, Seoul, APO S.F., CA 96301, USA

DESCRIPTION:

President Ferdinand Marcos launched *Masagana 99* in May of 1973 in a nationally televised ceremony. Calling the project "a program of survival" in the wake of regional flooding in 1972 and of a national drought in 1972/3, Marcos rallied the nation to cooperate in a rice-growing scheme billed as a remedy to a production slump that threatened to deplete the Philippines' foreign exchange and work other economic injuries. The note of urgency reflected the fact that the rice shortage that year had been estimated at 700,000 tons. In terms of the number of farmers involved, the degree of government and private-sector collaboration, geographic sweep, the use of the mass media, reliance upon trained extension agents, the spread of new rice-farming technologies, and gains in rice-yields, the project Marcos announced was the largest and most comprehensive in the nation's history.

Masagana 99 has 11 elements. They include (1) a research-based technology package, (2) a scheme for the production and distribution of seeds, (3) a fertilizer allocation and distribution system, (4) a campaign aimed at controlling pests and plant diseases, (5) a credit scheme, (6) a program for distributing irrigation pumps and otherwise improving irrigation systems, (7) a program for increasing the number and reach of mobile agricultural extension agents, (8) a mass media campaign created to spread information and to educate the public on agricultural concepts and practices, and (9) a system of price supports coupled with procurement and grain-storage programs. The remaining two elements, administrative and cross-sectoral, are a focus on carefully defined target areas and a management unit charged with planning, implementing, and monitoring the overall program.

Radio functions as the mainstay of the mass media component of *Masagana 99*. Its heavy use reflects research findings that radio reaches up to 85 percent of the population and that three out of every four Filipino farmers own a transistor radio. Over 224 radio stations broadcast advice, jingles, and skits on agriculture ten times per broadcast day, while 125 radio stations carry over 50 local agricultural programs. Principal back-up media include instructional comics, booklets and bulletins in the eight major dialects of the country, newspapers (which voluntarily devote ample news space to the project), and instructional promotional posters. TV's role has been limited, consisting primarily of coverage of the project's opening ceremony and of occasional field activities.

The agricultural broadcasters involved in this project serve as more than disc jockeys. They act as information officers in the Provincial Action Committees (the project's basic administrative units), answer queries from listeners, tape interviews with both information suppliers and information users, conduct research related to the broadcasts, and attend community activities related to food production. In addition, they keep daily broadcasting logs, meet weekly with the provincial broadcasting authorities to plan and review programming, and stay abreast of the informational and educational activities of all agricultural and rural development agencies.

In 1977, *Masagana 99's* emphases on realizing higher yields and including increasing numbers of farm families were intensified. Since then, the project has been known as *Masagana 99 + 10*.

RESULTS:

Despite transportation problems, inclement weather, distribution tie-ups, and pest infestations, rice yields in the *Masagana 99* area increased dramatically — 28 percent from 1973 to 1974, an additional 1 percent in 1975, and another 10 percent in 1976. In 1974/5, for example, yields averaged 3.3 tons per hectare in the project area and .77 tons in the areas not covered by the project. Predictably, initial production leaps of the magnitude realized in the project area boosted farmers' gross incomes radically. For example, at the end of the program's first year, one study shows, farmers in three participating provinces (in which individual landholdings averaged slightly over two hectares) enjoyed income gains of 118 percent. Since 1976, the total harvested crop has steadily gone up, and in late 1977 the Philippines exported 25,000 metric tons to Malaysia and Vietnam. Total rice exports, including 1977's and 1978's, are expected to total 149,000 metric tons. The repayment problem, which has plagued the program, has grown less severe, but the number of farmers participating has dropped to 249,000, and inflation and cost increases of agricultural inputs have wiped out some of the gains made by the majority of participants.

The impact of the media and messages used in *Masagana 99* has not been evaluated apart from overall impact of the project on production totals and income gains.

OF NOTE:

- The word *masagana* means bountiful harvest and the 99 of the project title refers to the target yield of 99 cavans (1 cavan equalled 44 kilos at the outset of the program but has since been adjusted to equal 50 kilos).
- The basic research related to this project was conducted by the International Rice Research Institute, the University of the Philippines at Los Baños, and the Philippines Bureau of Plant Industry. The pilot phase was implemented by the National Food and Agriculture Council of the Department of Agriculture and Natural Resources, whose efforts were supported by the Bureau of Agricultural Extension, IRRI, BPI, and the U.S. Agency for International Development.
- The Management Information System developed in conjunction with *Masagana 99* was designed to help project managers overcome numerous administrative problems that typically beset agricultural projects: weaknesses in links between information sources and decision-makers, difficulties associated with distinguishing causal factors of production from incidental factors, and problems bearing on the coherence and reliability of information culled from many sources. The MIS adopted includes baseline data, standard indicators on data, "on line" data from the field, regular sample surveys, set procedures for analyzing data, feedback and evaluation, carefully spelled out operating assumptions, and other analytical tools for decision-making.
- The field staff reports to a Provincial Program Officer, who summarizes its comments and relays them first by radio and then by mail to the Management Committee Staff.
- Purchases of consumer goods such as cook stoves, refrigerators, and motorcycles by farm families involved in *Masagana 99* have increased so dramatically in some areas that the new variety of rice is sometimes called *Honda Rice*.

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- "*An Agricultural Management Information System: Lessons from Masagana 99*," Kenneth F. Smith, PASITAM Design Notes, No. 7, May 1976.
- "*A Communication Behavior Study of Small Rice Farmers: Diffusion and Feedback in the Masagna 99 Rice Production Program in the Philippines*," Hernando V. Gonzalez II, unpublished M.A. thesis, University of Hawaii, December 1977.
- "*Masagana 99: A Renaissance in Agricultural Communication*," Vicente C. de Jesus, paper presented to the 3rd Research-Media Workshop of the Philippine Council for Agricultural Research, Davao City, August 1975.
- "*Masagana 99 Program: Farmers', Technicians', and Credit Agencies' Viewpoints*," Eusebio P. Mariano, paper presented to the First Agricultural Policy Conference for Policy and Development Studies, U.P. at Los Baños, April 1975.

Clearinghouse on Development Communication
October 1978

RADIO EDUCATIVE/PILOT PROJECT IN COMMUNICATION MEDIA IN ADULT EDUCATION Senegal

TARGET AUDIENCE:	Senegalese farmers, livestock producers, fishermen, and others (roughly two million people)
OBJECTIVES:	To provide food producers with practical information and with the opportunity to express their opinions systematically and effectively; to provide technical training
MEDIA:	Radio, correspondence, film, and interpersonal communication
DONORS/SPONSORS:	The Senegalese Government (sole supporter since 1973) and UNESCO (until 1973), with technical assistance in the preliminary stages from the governments of Canada and France
DURATION:	Initiated in 1968; ongoing
CONTACTS:	Boubacar Sock, EARO UNICEF, P.O. Box 44, 114 Nairobi, Kenya; Henry R. Cassirer, Les Moulins, 74290 Menthon-St. Bernard, France; and Radio Educative, Office de Radio/Télévision du Sénégal (ORTS), B.P. 1765, Dakar, Senegal

DESCRIPTION:

Senegal was the only African nation to take UNESCO up on the offer made in the early 1960s to establish "a pilot center for the production and testing of audio-visual materials and equipment for adult education" in Africa. The project that subsequently emerged had two dimensions: *Radio Educative Rurale* (now called simply *Radio Educative*) and a five-year television component (which ended in 1969). The TV broadcasts, 121 programs in all, were directed to 250 women in Dakar and remained strictly experimental. The radio broadcasts, in contrast, were originally intended for a potential audience of 800,000 (the farm population in the three *Wolof*-speaking administrative regions reached by the pilot broadcasts) and later became nationwide. The primary aims of the project were: to test the use of modern media in the context of adult education in Africa, to create a demonstration center of possible use to other developing countries, to train local people to become technicians and producers, and to help restore to ordinary people the sense of personal power eroded during decades of colonial rule.

The complexity of its mandate and numerous administrative bottlenecks within the Senegalese bureaucracy together kept the radio component from getting into full swing until 1968, when President Senghor himself intervened. Calling for government reorganization and cooperation, Senghor provided the missing ingredient: committed leadership. Under his guidance, *Radio Educative* became an information duct, a change agent, and a government watchdog.

Under the project design finally implemented, 57 radio listening groups were established in the pilot provinces of Thies and Diourbel in the Sine Saloum. Programming was to focus on topics of local and pressing concern — namely, the production and marketing of groundnuts, the responsiveness of government agencies to the peasant farmers' needs, the ways in which debts are incurred and repaid in the villages, and other critical social and health problems. The groups were led by regional staff members of the department of "Animation Rurale" (which has since merged with other government departments) or by animators recruited as volunteers in the village, each of whom took a three-day training course in group dynamics. The third element of this communication system, farmer feedback, took the forms of recordings made in the field and letters. Members of listening groups dictated letters, with the handful of literate members doing double duty as scribes, to the higher-ups in government and to the President himself. In these letters, the peasants aired their complaints, exposed what they believed to be cases of government ineptitude, and took the government to task for standing behind unfair or short-sighted policies — all of this they did without fear of censure and with the intention of making themselves heard.

RESULTS:

The most meaningful indicator of *Radio Educative's* initial impact is probably its effect on national policy. As a direct outcome of the "radio dialogue" begun in 1968, a flood of letters poured into government offices, a flood that eventually moved President Senghor to standardize the price given to groundnut producers (to the great advantage of the producers in remote areas, who were once discriminated against in the marketplace) and to annul in 1970 peasant debts contracted in the purchase of seeds, agricultural equipment, and supplies.

A second indicator of *Radio Educative's* worth is its expansion and its continuation. *Radio Educative* has operated without any foreign assistance since 1973. While some observers feel that the growth in the number of people participating in listening groups has not kept pace with the growth in the number of individual listeners and that the potential of the broadcasts to promote community participation is thus not being realized, overall response has by all estimates remained excellent. More than 500 villages have sent in thousands of letters, and the "malaise paysan" is showing some signs of crumbling in the face of incentives for action and participation.

Over time the listening audience has dispersed, with group listening giving way to individual listening. Reasons for this shift include the disappearance of *Animation Rurale* activity, *Radio Educative's* lack of personnel and transport, and the boom in cheap transistor radios. This tendency has not reduced the project's impact or emphasis on feedback, however.

OF NOTE:

- Since anyone who understands *Wolof* can profitably listen to *Radio Educative's* broadcasts, the actual audience has always exceeded the target audience. In addition, programs in *Peul*, *Malinke*, and other languages are now being prepared.
- About 70 percent of *Radio Educative's* programs are recorded outside the studio.
- Broadcasting in *Wolof*, which many Senegalese peasants speak, presented special problems to the less than astute moderator of a listening group since *Wolof* has a special feature: a code for transmitting messages intended only for the ears of the initiated.
- Three *Wolof* concepts used to interpret the peasants' statements are "TAWAT" (complaining), "DIGUAT" (disputing), and "THIOW" (making a fuss about a problem).
- Some government employees have complained about *Radio Educative*, claiming that peasants have no need to write the authorities when the authorities' representatives are on hand to hear them out or that it is disrespectful and counterproductive to challenge the existing administrative hierarchy.
- At a pan-African communication conference in Dakar in 1977, Senegal's President Senghor said that "educational radio should above all help peasants to cultivate the most authentic African values — courtesy, a liking for work, and a sense of solidarity — at the same time that it instills in them the sense of thrift, organization and method, qualities more properly European."
- In the early years of the project, some Senegalese viewed it as a UNESCO communication laboratory, while UNESCO employees tended to view the project as a joint venture of mutual benefit to both UNESCO researchers and the Senegalese people.

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"Senegalese Experience in Using Radio Broadcasting for Animating and Educating Basic Communities with a View to Development," Boubacar Sock, a presentation at IEC's Conference on Distance Learning, Dartington, England, September 1977.

Clearinghouse on Development Communication
April 1978

THE RADIO FARM FORUM PILOT PROJECT

Thailand

TARGET AUDIENCE:	Thai farmers and the agricultural extension service
OBJECTIVE:	To test the effectiveness of the radio forum concept in increasing two-way communication between farmers and Thai agricultural extension agents
MEDIA:	Radio and publications, reinforced by interpersonal communications
DONORS/SPONSORS:	The Department of Agricultural Extension (DOAE) of the Ministry of Agriculture and Cooperatives of the Royal Thai Government, and the UNDP/Development Support Communication Service
DURATION:	Conceived in 1968; first executed in 1975; currently being expanded to cover five provinces in 1977 and 15 provinces in 1978
CONTACT:	Mr. Pote Chumsri, Department of Agricultural Extension, Ministry of Agriculture and Cooperatives, Rajadamnern Avenue, Bangkok, Thailand

DESCRIPTION:

Although the *Radio Farm Forum Project* was conceived in 1968, implementation of the project was delayed several years while the DOAE was reorganized. In 1975, a pilot project was conducted to test the applicability of the radio forum concept to Thailand's farming region. After the study area was systematically selected, listening groups were formed with the cooperation of the village headmen. This was followed by peer-selection of four Radio Farm Forum leaders in each of the eight village groups in the project. Finally, training programs for the local forum leaders were activated.

When the parts of the project were in place, weekly radio programs were broadcast. After each half-hour program, village listening groups discussed the content of the program and of supplementary printed materials prepared by DOAE. They were encouraged to comment on both the programs and the literature and to find local practical applications for the ideas and practices both mentioned. Problems that could not be worked out among the village listening groups were referred via the weekly reports prepared by the RFF leaders to the extension officer of the DOAE and to other people or organizations able to offer assistance.

Responses to the listening groups took three basic forms. Radio broadcasts and publications were used to answer some questions, while DOAE field staff and other specialists visited the villages to solve other problems. A third type of contact involved whole groups in trips to seed stores, to university research stations or to demonstration plots, and in both short seminars and film-showing sessions.

RESULTS:

The *Radio Farm Forum Project* increased the flow of information between farmers and extension agents in both directions. The extension agents saw the value of making regular and frequent contacts with farmers and enjoyed the sense of continuity the program gave them. For their part, farmers tended to rely increasingly upon the agents once they came to feel that the agents were dealing with their problems and needs on a timely basis. Moreover, because the messages dealt with specific problems, the farmers tended to remember them. Accordingly, the agents came to take more and more satisfaction in their work. In short, a felicitous self-reinforcing dynamic evolved.

More generally, the project succeeded in organizing interest groups to solve shared problems and in demonstrating the effectiveness of reinforcing consistent messages through various communication channels. It showed the agents that the program was feasible and the farmers that it was desirable. Indeed, farmers from areas adjacent to the radio project inquired about and requested similar programs.

OF NOTE:

- The *Radio Farm Forum Project* successfully combined with an FAO-sponsored project to improve irrigated agriculture in northeastern Thailand. In seeking the joint cooperation of various government departments (the Ministry of Commerce, the Rice Bureau, etc.) and of various international agencies, the project may also have opened up or strengthened intra-governmental and inter-governmental communications lines.
- Farm forums in many cases became forums for other local problems.
- Village headmen were enlisted to help lend legitimacy to the project, and students from the local university and agricultural college helped conduct the field surveys.
- The success of the *Radio Farm Forum Project* prompted the Thai Government to consider integrating the radio forum approach into other activities. The project itself also led to the government's self-appraisal of its capacity to evaluate such efforts.

REFERENCES:

"Summary Report on the Radio Farm Forum Pilot Project," (RB # 336), Supalak Purnasiri and Robert S. Griffin, UNDP/DSCS, Bangkok, Thailand, November 1976.

Clearinghouse on Development Communication
June 1977

SOYBEAN PROMOTION CAMPAIGN

Bolivia

- TARGET AUDIENCE:** Residents of three provinces in the state of Cochabamba, Bolivia
- OBJECTIVE:** To promote the consumption of unprocessed soybeans to improve the nutritional status of the rural poor
- MEDIA:** Interpersonal communication, radio, print, television, newspaper, posters, film, videotapes, slides
- DONORS/SPONSORS:** University of San Simon, Cochabamba, Bolivia; University of North Carolina at Chapel Hill, USA; United States Agency for International Development (AID)
- DURATION:** 1978 - 1979
- CONTACT:** Dr. Joseph Edozien, University of North Carolina, Department of Nutrition, 315 Pittsboro, Chapel Hill, North Carolina 27514, USA

DESCRIPTION:

The Bolivia Soybean Promotion Campaign was part of a four-year collaborative project carried out by the University of San Simon, Cochabamba, Bolivia, and the University of North Carolina in the United States, and sponsored by the U.S. Agency for International Development. The primary objective of the project was to develop a methodology for promoting the direct consumption of unprocessed soybeans (soya) with the ultimate goal of improving the nutritional status of the rural poor in low-income developing countries. It was implemented in Bolivia as a pilot project among a test population of 100,000 in three provinces in the state of Cochabamba, Bolivia. Bolivia was selected from three candidate countries because it had an adequate supply of soybeans which was not being used for human consumption and because the government of the country expressed interest in the project.

The 18-month promotional campaign began in October 1978. Using radio, posters, videotapes, films, and slide-tape presentations, the campaign was organized into three rounds. Each round was evaluated by a survey of random households from the test area and, based on the data obtained, changes were made in the organization, emphasis, and plans of the next round. The basic themes of the media campaign were 1) as a protein food, the soybean is as good as meat, eggs, milk, and cheese, but costs about one-fifth as much; 2) the soybean is good for all members of the family, especially infants, children, pregnant women, and breastfeeding mothers; and 3) soybeans can be prepared in a variety of ways.

In the first round, 21 60-second jingles were produced in both Spanish and Quechua. The jingles were rotated on a 12-week cycle among four radio stations, allowing for 16 broadcasts per day, six days per week. In addition, there were 23 different recipe broadcasts in the first round. Three of these programs contained basic information on soya, while each of the other programs contained a recipe. Three demonstration teams traveled throughout the test area which was divided into 90 demonstration zones. Each two-person team carried a bottled-gas stove, cooking equipment, soybeans, either pre-cooked for development into familiar dishes or pre-soaked for preparation of toasted soya or soya milk. Each team also carried one-kilo packets of soybeans and recipe books for sale. The teams were equipped with visual aids, e.g., large posters illustrating basic nutritional concepts, flip charts, and, for large group demonstrations, slides and slide projectors. A Community Organization Team was responsible for scheduling demonstrations, distributing posters, monitoring radio stations that broadcast soya jingles and programs, and publicizing the demonstrations throughout the communities.

The promotion effort was intensified in the second round, and changes were made based on the evaluation survey conducted at the end of the first round. New jingles were produced; otherwise, no significant changes were made in the radio promotion. The results of the evaluation of round one's demonstrations showed that few members of the audience thoroughly understood Spanish, so beginning with the second round, all the demonstrations outside the city of Cochabamba were conducted in Quechua. The evaluation also showed that people were not using most of the 23 recipes, so the number of recipes demonstrated was cut to the three basic ones plus one other. At the end of the demonstration, the team emphasized that any of the 23 recipes in the cookbook could be prepared from the three basic soya preparations.

In the third round, adjustments were made in the content of the radio announcements after a survey round two revealed that the largest demographic groups using radio were male heads of households and teenagers, rather than the prime target audience of younger married women, pregnant women, and women with small children. The announcements were changed to appeal to the dominant listening audiences without bypassing the primary target audience. The recipe programs were eliminated and replaced by one-minute announcements. Finally, jingles were given a stronger nutrition message, emphasizing the importance of protein and identifying soya as a "protective" and "body-building" food.

RESULTS:

Soya sales increased steadily from 1,118 kilos in the first month of the campaign until May 1979 when 11,545 kilos were sold, a ten-fold increase. There was, however, a sharp 50 percent drop in June to 4,848 kilos, attributed in part to the harvesting of new crops. Thereafter, monthly sales again increased.

The interim evaluations showed a steady increase in awareness of the value of soya. Initially 81 percent said they knew nothing about soya. By the first evaluation, this percentage had fallen to 9.8 percent. When people were asked if they had eaten soya, positive responses rose from 62.7 percent at the baseline evaluation to 80 percent at the third evaluation. When asked if they had cooked soya at home, the respective responses at the three evaluations were 29 percent, 40 percent, and 45 percent. The evaluation results suggest that the demonstrations were also effective. In each of the evaluations 90 percent of the respondents said that a demonstration team had been to their community and 40 percent said they had attended a demonstration.

OF NOTE:

- Prior to the promotional campaign, initial data was obtained on about 800 households containing about 4,000 individuals (a five percent subsample). Data collected included socio-economic information, food purchasing practices, food preparation and consumption practices, and recipe information.
- A Cochabamba newspaper, El Tiempo, and the University of San Simon television station both followed the project and gave progress reports approximately every two weeks.
- Soybeans were accepted more readily in the city than in the rural target area. Only 50 percent of the total amount of soybeans was sold in the test area while the rest was sold in Cochabamba City.
- An unanticipated source of information about soybean preparation was local community store owners. One-fifth of the population that learned how to cook soya said they learned from store owners.

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"Soybean Utilization Project Final Report," Department of Nutrition, School of Public Health, University of North Carolina at Chapel Hill, 1980.

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Clearinghouse on Development Communication
December 1983

NATIONAL PLAN FOR FEEDING AND NUTRITION

Colombia

- TARGET AUDIENCE: Pregnant and nursing women in Colombia
- OBJECTIVE: To provide information on breastfeeding
- MEDIA: Interpersonal communication, radio, print, audiovisual aids, TV, film, slides
- DONOR/SPONSOR: Plan Nacional de Alimentación y Nutrición de Colombia (PAN)
- DURATION: 1979 - 1980
- CONTACT: Dr. Sonia Restrepo, Jefe Medios Masivos PAN, Departamento Nacional de Planeación, Carrera 10 #27-27, Bachue 1101, Bogotá, Colombia
- DESCRIPTION:

In Colombia, 2.5 million children under five years of age (62 percent of the child population), suffer from malnutrition. The problem of malnutrition is particularly acute among children under two years of age, and accounts for the high mortality rate. One of the causes of malnutrition is premature weaning.

For these reasons, in 1979, the Plan Nacional de Alimentación y Nutrición de Colombia - PAN (National Plan for Feeding and Nutrition) -- started an educational campaign aimed particularly at pregnant and nursing mothers both in urban and rural areas and at the poorest 30 percent of the population. The main objectives were to: 1) encourage breastfeeding, which has decreased significantly in the last ten years; 2) lengthen the period of breastfeeding; 3) delay the introduction of other foods; and 4) discourage bottle feeding.

PAN felt that best results would be attained if the campaign reached the pregnant and nursing mothers through people who directly or indirectly had influence on them: health professionals, such as doctors, nurses, and nutritionists; extension agents, such as health promoters and school teachers who work directly with local communities; and Colombia's ruling class, the politicians. The campaign was also designed to affect both public opinion in general and the directors of companies that produce baby foods and milk substitutes.

Seminars were organized to train personnel in the health sector, and a special strategy was designed to train the extension agents who would work in the community. A team of professionals was responsible for teaching regional teams the contents of the campaign and for training them how to teach the mothers. In turn, each regional team trained local teams who then worked directly with the community.

A variety of materials was developed to support the task of teaching and informing individuals, the most important of which were a handbook and flipchart for extension agents. The handbook explained both what was to be taught and how to teach it. The flipchart, which accompanied the handbook, consisted of 19 pictures which were used to illustrate the talks. Three promotional posters were produced and placed in hospitals, medical centers, schools, and other public places.

Mass media played an important role in the campaign. While doctors, nurses, health workers, and other educational agents worked on a person-to-person basis or in small groups, messages on the advantages of breastfeeding, the techniques to use, and the properties of maternal milk were transmitted as reinforcement and support through the radio and television networks, and the cinemas. Every day for nine months, 80 stations broadcast 15 30-second advertisements recommending mother's milk as the only food for babies up to four months old and as an ideal food because of its nutritive and immunizing value. A series of daily programs, each lasting ten minutes, was also broadcast over a three-month period. Television was used to air a 45-second advertisement three times a day at peak listening times on the two most important national TV channels, particularly before and after the soap operas, which attract a large female audience.

Films were used in two ways: a short ten-minute film was produced and shown in 140 cinemas throughout the country, and a slide was projected before the feature film in 90 cinemas in several major cities. Finally, a 15-minute slide show of 76 slides was produced and shown to the poorer sectors of the population by a mobile projection unit.

RESULTS:

The educational campaign went further than PAN anticipated. The Ministry of Health passed an official resolution obligating all health workers to teach and facilitate breastfeeding. The use of milk substitutes was also prohibited in hospitals and clinics, which put an end to the donation of powdered milk by companies to mothers immediately after childbirth. The President of the Republic issued a decree regulating the promotion and packaging of milk substitutes. Commercial production of the substitutes must now make specific reference to the superiority of maternal milk; it is prohibited to make reference to, or illustrate, a baby's bottle.

While concrete data is not available, the success of the campaign can be seen in positive results such as: 1) the increase in requests for advice on breastfeeding in hospitals, medical centers, and PAN's offices; 2) the organizing in hospitals of special programs to promote breastfeeding; and 3) the move by advertising agencies, even before the government decree, to start promoting their products and maternal milk simultaneously (for example, a commercial enterprise is promoting its milk product with the slogan, "First, Mummy's milk, and then...").

OF NOTE:

- Of all the mass media in Colombia, radio has the greatest impact. Colombians are avid listeners, so it is the best and often only means of reaching the rural sector and the urban poor.
- Contrary to the widely held belief that the rural and urban poor could only be reached through the images which they themselves project, it became evident that they preferred the image of an urban woman. For this reason, photographs on the poster of peasant women wearing the traditional panolon dress were replaced by images of attractive, middle-class urban women.

REFERENCES:

"A Multi-Media Strategy for a Breastfeeding Campaign in Colombia," by Sonia Restrepo. Educational Broadcasting International (EBI), March 1981.

Clearinghouse on Development Communication
December 1983

(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

NUTRITION MASS COMMUNICATION PROJECT India

TARGET AUDIENCE:	Opinion leaders, heads of households, housewives, teachers, and school-children in rural areas and small towns in Uttar Pradesh and Andhra Pradesh (approximately 250,000 people)
OBJECTIVES:	To determine the effectiveness of a mixed-media campaign in raising levels of awareness and understanding about weaning and pregnancy among rural, largely illiterate populations
MEDIA:	Radio, print, film, calendars, pantomime, posters, billboards and wall paintings, and dust covers for school books
DONORS/SPONSORS:	The U.S. Agency for International Development, CARE-India
DURATION:	Conceived in 1969; set up in early 1971, conducted from April through June of 1972
CONTACTS:	Sadhna Ghose, CARE-India, P.O. Box 3064, New Delhi-3, India; Ronald Parlato and Margaret Burns Parlato, 6503 Waterway Drive, Falls Church, Virginia 22044, U.S.A.; Dr. Lakshmi Krishnamurthi, CARE-India

DESCRIPTION:

The nutrition-information project launched by CARE-India in 1972 after three years of research and preparation was built upon two primary assumptions. The first was that the modern techniques used in urban mass media campaigns and market research can be successfully brought to bear upon the problems and needs of the Third World villager. The second was that a combination of carefully selected mass media is more effective than any single medium in reaching diverse target groups within a given population. More specifically, the experimental project was designed to test the relative effectiveness of positive and negative messages and to promote two particular messages: one related to the impact of proper and timely weaning upon a child's long-term health and one related to the importance to mother and child of eating green leafy vegetables during pregnancy.

Preliminary research and project design were accorded high priority in the CARE-India project. So that people would not be urged to buy foods that were unavailable, culturally taboo, or expensive, a team of researchers spent six months identifying economic, nutritional, sociological, and trade-related obstacles to beneficial changes in dietary habits. This research preceded and influenced the selection of the target audience, the eight target sites (each composed of three villages and one town), the media that would be used to relay the messages, and the specific content and wording of the messages. The research drew upon studies from various disciplines, included the research of other nutrition and communication projects, and involved a pre-campaign study of 2,400 sample respondents.

The ten-week campaign that grew out of the research findings made use of a variety of media but made no attempt to dazzle the target audience with novelties. Instead, simple messages that were designed to appeal to basic emotions and to ingrained beliefs were used. In Uttar Pradesh, where the positive approach was taken, some posters depicted a small boy being commended by his teacher, and others showed a village lad receiving a trophy for his athletic prowess. In Andhra Pradesh, where the more controversial negative approach was adopted, posters depicted a demon (a recognizable figure derived from South Indian mythical tradition) threatening the well-being of a pregnant mother in one case and a weaning infant in another. The same tactics were used and the same messages were carried in press inserts, billboards, wall paintings, short black-and-white films, radio spots, special editions of tabloid newspapers, calendars, booklets, and comic books. Since the campaign was expressly designed to test the effectiveness of mass media alone, interpersonal interventions were not part of the overall effort.

RESULTS:

Campaign evaluation results, based on a baseline survey (2,500 interviews) and a post-campaign survey (2,500 interviews), indicated that a mixed media campaign can successfully reach isolated rural audiences with new concepts and information. Apparently, a media mix designed especially to reach different sub-audiences can, through direct appeal, cross socio-economic and cultural lines. The survey showed that men and women of all ages, education levels, occupations, income levels, and castes responded equally well to the nutrition campaign, raising their awareness scores by the same number of points. On questions related to pregnancy, for example, scores for housewives rose from 53 to 84, while those of influential villagers rose from 63 to 95. In general, illiterate members of lower castes learned as much as highly-educated Brahmins.

Supporting the contention that mild shock is a valuable agent in promoting increased awareness and understanding of new ideas is the fact that 100 percent of those people exposed to negatively expressed messages remembered the campaign, while 91 percent remembered the positive message. Similarly, campaign audiences in Andhra Pradesh were more likely than their counterparts to remember specific media, to score high on the post-campaign test of knowledge, and to recall specific facts stressed during the campaign. The negative campaign may, the researchers speculate, have worked better because it was more creatively distinctive and more in tune with village culture.

The evaluation of the effectiveness of the various media showed that people exposed solely to highly entertaining graphic media learned as much as people exposed to all media. In both the positive and negative campaigns, films and posters proved most memorable; half those polled in Uttar Pradesh remembered the films and 65 percent remembered the posters, while the comparable figures for the negative campaign were 70 percent and 67 percent, respectively. Tabloids and radio spots were ineffective in both campaigns; fewer than 17 percent in Uttar Pradesh and fewer than 21 percent in Andhra Pradesh remembered either. Although the campaign was designed solely to raise levels of awareness and understanding, it appeared to have favorably influenced attitudes too. In three out of four cases (the weaning message in A.P. and the pregnancy message in both provinces), there was virtually no reluctance to accept the campaign information as credible. In the fourth case, the expressed resistance was felt to have reflected dietary differences: the brittle bread eaten in U.P. may have been harder to visualize in pulverized form than other foodstuffs, such as the rice eaten in South India.

OF NOTE:

- Booklets designed for teachers carried letters of approval and support signed by the two states' top education officials. So too, popular Hindi and Telegu film stars appeared in one-minute endorsements at the end of each of the films.
- Radio was found to be largely ineffective in the campaign, since relatively few people in the target areas owned or had access to radio sets.
- A KAP study on selected nutritional topics was carried out as part of the pre-campaign research.
- The "two-step" theory of information flow was not verified by the campaign. Specialized and highly detailed information disseminated to teachers and influentials only through booklets was not passed on to the general populace.
- Pantomime, felt to be closely related to traditional Indian dance in its nonverbal communication, was found to be too abstract for most audiences.
- More than a project write-up, CARE-India's report of the results of this nutrition-information project includes both a model for running a nutrition-education campaign and a comprehensive discussion of the sociological and communication issues with which campaign workers and officials must grapple.

REFERENCES:

Planning for Nutrition Education: The Application of Mass Media and Extension to Social Action Programs, Ronald Parlato, CARE-India, 1973.

"Food Attitudes in Andhra Pradesh and Uttar Pradesh," CARE-India, 1973.

"Breaking the Communications Barrier," Ronald Parlato, CARE-India, 1972.

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Clearinghouse on Development Communication
January 1978

NUTRITION COMMUNICATION AND BEHAVIOR CHANGE PROJECT

Indonesia

- TARGET AULIENCE:** Pregnant and lactating women, and children under two years old living in three Indonesian provinces: the Special Territory of Yogyakarta, Central Java, and South Sumatra
- OBJECTIVES:** To improve nutrition message design methodologies and to try new delivery mechanisms; to show change in the nutritional status of a population receiving only education about basic practices they can implement with their own resources
- MEDIA:** Interpersonal communication, posters, flipcharts, newsletters, radio
- DONORS/SPONSORS:** Indonesia's Ministry of Health; the World Bank
- DURATION:** 1977 - 1982
- CONTACTS:** Dr. I. B. Mantra, Project Chief, Directorate of Community Health Education, Jalan Pasar Minggu #17, Jakarta Selatan, Indonesia; Richard K. Manoff, President, and Marcia Griffiths, Technical Assistance Director, Manoff International, Inc., 1789 Columbia Road, N.W., Washington, D.C. 20009, USA

DESCRIPTION:

The Nutrition Communication and Behavior Change Project is one component of a larger Indonesian Nutrition Program, funded with assistance from the World Bank. In 1977, the pilot project was established in five subdistricts of three provinces: Godean and Karangmojo in the Special Territory of Yogyakarta; Masaran and Sapuran in Central Java; and Indralaya in South Sumatra. The total population of the areas was 40,500 households, or approximately 225,000 people. The objective of the project was to show changes in the nutritional status of pregnant and lactating women and children under two years old through nutrition education intervention alone. The challenge, therefore, was to produce educational messages that addressed the most pressing problems facing people in the project areas, and to formulate them in such a way that they offered appropriate, practical suggestions for practices that rural families could follow in their homes as often as three or four times every day.

The project developed in four stages. In the first two stages, from 1977 to 1979, the efforts were focused on community preparation; selecting, training, and equipping about 2,000 volunteer nutrition workers, or kaders, and on initiating a weighing program in each village to reach more than 52,000 children. The third stage, from 1979 to 1981, involved the development of a communications strategy, beginning with the extensive research phase in which families in the project areas participated in the formulation of the strategy, through the testing and production of the materials, and ending with the dissemination of the materials. The fourth stage, in 1982, was a time of continued project implementation and evaluation.

At the outset of the work on communications strategy, the target population and major nutrition problems were identified. The segments of the population defined as being "at risk" were pregnant and lactating women and children under two years old. The major nutrition problems identified for the education program were: 1) protein-calorie malnutrition in children from birth to four months old (mothers' nursing practices); 2) protein-calorie malnutrition in children 5 to 8 months old (introduction of solid foods); 3) protein-calorie malnutrition in children 9 to 24 months old (total food quantity); 4) infant diarrhea; 5) undernutrition of pregnant women; 6) undernutrition of lactating women; and 7) vitamin A deficiency in young children.

The preliminary research stage combined qualitative research with innovative week-long trials of proposed behaviors which determined behavior change objectives. The results of the in-depth discussions with mothers influenced the media strategy, choice of materials, and motivational statements used in the messages. Because the kader network was extensive, the media plan placed emphasis on kaders and used the radio to repeat their messages and to encourage people to seek their advice. The target audience was seen as many groups, each with a particular problem and need for information. For example, the messages for pregnant women were distinct from those for nursing mothers. The idea was that mothers need not remember the information for everyone, but only that relevant to their situation. To deliver these targeted messages, the growth monitoring session was used for individual counseling, and a poster resembling the calendars people liked to display in their homes was developed. There was a poster for each of the principal target groups. The poster for children 5-8 months old, for example, showed a mother feeding her child breastmilk or bubur campur (a mixture of rice, green vegetables, fish, and oil.) Under the picture there are four printed boxes corresponding to the four times a day weaning food should be fed to the child. Beneath each of the four boxes, there are vertical columns of 30 boxes in each column, one for each day of the month. The mothers were instructed to puncture a hole in a box after each feeding. Even though it was not expected that mothers would mark the boxes every day, the posters served as a reminder of the kader's advice. Each time a mother passed the poster, she was prompted to think about the recommended practice and her commitment to try it.

RESULTS:

In November 1981, an extensive evaluation was conducted involving a total of 1,000 households, 600 in the project areas and 400 in the comparison areas. The results were positive and suggest that the project had considerable effect not only on the knowledge and attitudes of the families who participated, but also on their practices. In addition, these practices favorably influenced the growth of their young children. The Nutrition Education (NE) group differed positively and significantly from the comparison group in all indicators, including participation of mothers in nutrition activities and their nutrition knowledge scores. Other evaluation results reveal that 1) parents in the NE villages offered their children more of the foods stressed in the messages; 2) children of the families in the NE villages had higher protein and calorie intakes; and 3) children in the NE areas grew significantly better after 5 months of age than children whose families participated in other nutrition programs. By 24 months of age, 40 percent of the NE infants were better nourished than infants in the comparison group.

The messages and materials of this pilot project will gradually be adopted by the National Nutrition Program.

OF NOTE:

- The cost per beneficiary in this project was the lowest of six interventions recently compared in World Bank-assisted nutrition projects. A study by the World Bank calculated that for the population as a whole, the annual cost per project beneficiary (children zero to 24 months old and pregnant and nursing women) was US \$3.94 during the pilot project stage, but that if the project were to be expanded to more areas within Indonesia, the annual cost per beneficiary would be reduced to \$2.05. Based on the World Bank estimates and the finding that 40 percent of the NE infants were growing better by 24 months of age than children in the comparison group, the cost per child with nutritional status improvement was \$9.85 per year for the pilot project and would be approximately \$5.13 per year for an expanded program.

REFERENCES:

"Nutrition Communication and Behavior Change Component, Indonesian Nutrition Development Program," Project Description by Manoff International, Inc., 1982.

"Mothers Speak and Nutrition Educators Listen: Formative Evaluation for a Nutrition Communications Project," Vols. I - V, by Manoff International, Inc., 1982.

Clearinghouse on Development Communication
December 1983

NUTRITION EDUCATION PROGRAM

Jamaica

- TARGET AUDIENCE:** Pregnant women and mothers of young children
- OBJECTIVE:** To educate Jamaican women about nutrition
- MEDIA:** Interpersonal communication, radio, television, print, posters
- DONORS/SPONSORS:** Ministry of Health, Jamaica; World Bank; Institute of Mass Communications of the University of the West Indies (CARIMAC); Scientific Research Council; National Family Planning Board; The Caribbean Food and Nutrition Institute (CFNI); Communication Media Agencies
- DURATION:** 1977-1979; 1981 - ongoing
- CONTACTS:** Mrs. Gerita HoSang, Program Coordinator, Ministry of Health, Nutrition Division, 14 Eureka Road, Kingston 5, Jamaica, W.I.; Caribbean Food and Nutrition Institute, P.O. Box 140, Kingston 7, Jamaica, W. I.

DESCRIPTION:

The Jamaica Nutrition Education/Communication Program, part of a nationwide communication campaign, was launched in October 1977 to improve the nutritional status of pregnant women and young children. Its major thrusts were pre- and postnatal care, the reduction of malnutrition in children from birth to four years of age, and the reduction of anemia in pregnant and lactating women. The program focused on five basic messages: 1) pregnant women should eat the right kinds of food; 2) babies should be completely breastfed for their first four months of life and then partially breastfed until 9-12 months of age; 3) babies should be weaned on nutritious foods; 4) the Maternal Child Health Care Services should promote family health; and 5) family planning is a means to a healthier family.

Three strategies were used to communicate the messages: seminars to inform and encourage the participation of doctors, paramedical staff, and community leaders; a mass media strategy aimed at the general public; and interpersonal communication activities involving field-workers from the Ministry of Health and the community. The production of support materials such as posters, brochures, and other printed information was planned to reinforce the mass media messages and increase interpersonal communication.

The mass media strategy included the use of radio and television spot announcements and dramas, newspaper features and advertisements, posters, billboards, bumperstickers, and calendars to convey the messages "The Breast Is Best" and "Good Health Begins with Eating Right." A series of colorful flipcharts and leaflets showing the types of foods recommended for infant feeding from birth to one year of age were also distributed at maternal and child health clinics. During this phase of the campaign, the medium used most heavily was radio, which reached even the most remote parts of the country. Television, which generally carried short advertisements and discussion programs, was not as extensively used. The press published, in addition to advertisements and news releases, many detailed and informative articles dealing with all of the issues covered by the campaign.

Due to financial difficulties, the program was suspended in December 1979. Between October 1979 and March 1980, CARIMAC, in cooperation with the Ministry of Health and Environmental Control, evaluated the program. The evaluation detailed many of the problems and offered constructive advice for improvement. Based on the findings, the program was again launched in January 1981 and renamed "the National Nutrition Education Program." The objectives of the program basically remain the same. The changes that were made dealt more with the structural aspects and the approach. While radio and other mass media continue to be the main means for sharing information, community activities (including home visits) and training have been increased. The scope of the program has also been widened to provide education about nutrition-related diseases in the country. A Nutrition Week was planned and implemented in May 1982. The theme of the week was "Young Child Feeding and Diabetes." Observed island-wide, the preparation and implementation generated a fair level of participation from community organizations. In addition, workshops and conferences have been held.

RESULTS:

The evaluation conducted between October 1979 and March 1980 revealed a high level of breastfeeding practice, 94 percent. However, knowledge regarding the advantages of breastfeeding was superficial. While 96 percent of the respondents could say breastfeeding was good for babies, only 43 percent could state reasons why it was good. If inability to state reasons indicates a total lack of knowledge, the gap in knowledge may have implications, because in the absence of any firm reasons to support the practice, there remains the strong possibility that breastfeeding could give way to bottle-feeding as a result of more persuasive commercial communications and influence.

OF NOTE:

- Before the first campaign was launched in 1976, CARIMAC conducted a baseline survey to find out prevailing views and habits regarding breastfeeding and child care, and to identify the sources of information which were likely to have the greatest impact.
- Transportation was a problem to nutrition officers as cars were not always reliable enough for rural trips. This factor reduced their work in rural areas.

REFERENCES:

"Mass Media and Community-Centered Approaches in Jamaica's Nutrition Education Program," by B. A. Okwesa. CAJANUS, the Caribbean Food and Nutrition Institute (CFNI) Quarterly, Vol. 15, No. 1, 1982.

Nutrition Education Report, November 1981 - October 1982. CFNI, Jamaica, 1982.

Report on the National Nutrition Education Program, by Gerita HoSang, Ministry of Health, Jamaica, 1980.

Evaluation of the Nutrition Education/Communication Program, by Doris Haberman, CFNI, 1980.

Clearinghouse on Development Communication
December 1983

MASS MEDIA VS. DIRECT EDUCATION PROGRAM Mexico

TARGET AUDIENCE:	Mothers with children five years old and younger
OBJECTIVE:	To test the effectiveness of mass media techniques as compared to direct methods of education in transmitting basic concepts of hygiene, health, and diet
MEDIA:	Radio, pamphlets, posters, interpersonal communication
DONOR/SPONSOR:	Instituto Nacional de la Nutrición, Consejo Nacional de Ciencia y Tecnología de México
DURATION:	1976
CONTACT:	María Teresa Cerqueira, Head Researcher, División de Nutrición, Instituto de la Nutrición, Av. San Fernando y Viaducto Tlalpan, México, 22, D.F., México.

DESCRIPTION:

In 1976 Mexico implemented a project to compare the effectiveness of mass media vs. direct education in transmitting information on health and nutrition to rural mothers with children five years old or younger. Three rural communities were selected for the project: one to receive nutrition information through a traditional classroom setting, the second through the mass media, and the third to serve as a control group. Community assessments were completed to guarantee homogeneous populations that met the following criteria: 1) agriculture-based economies, 2) approximately equal populations, 3) equal access to urban or market centers, 4) equivalent public services, such as water, electricity, education, and radio reception, and 5) no local health services. The three communities are located in the same state, approximately 150 kilometers west of Mexico City.

A market survey was conducted to identify locally available foods. A dietary survey was done to determine the eating habits of a random sample of 120 mothers with children five years old or younger. Finally, a questionnaire was administered to the sample of mothers to determine their degree of knowledge about nutrition. Each interview lasted about 20 minutes and was conducted by three senior nutrition students.

The direct (classroom) education program was taught by three nutrition students over a 12-week period. Two class meetings of two hours each were conducted each week, with the presentation of principles and discussion one day, followed by demonstration and practice the next. A total of four units were covered, each taking three weeks to complete. Unit One explained budgeting for an adequate diet, adding fruits and vegetables, and preparing high nutrition, low-cost dishes. Unit Two dealt with infant feeding, nutrition, breastfeeding, solid foods, and low-cost infant foods. Unit Three examined diets for pregnancy, variety, and food taboos. The final unit was concerned with hygiene in cleaning, preparing, and storing food and utensils.

The mass media campaign was carried out over the same 12-week period. Radio spot announcements, pamphlets, and posters were employed to cover the same topics as the four educational units. The radio spots consisted of four songs lasting three minutes each. Each song was broadcast for three weeks, once every two hours. The songs addressed the same themes as the four units. Three pamphlets were distributed to mothers in the sample population and to schools, churches, and local stores. The first dealt with diet, food combinations, and the importance of variety in food consumption. The second addressed infant nutrition and food preparation. The third showed how to prepare a puree with beans and tortilla mix. The three pamphlets were made available for one month each. The four posters were also designed to coincide with the four units. Each poster was distributed to the sample population of mothers and posted in schools, churches, stores, and other public areas in the community. Posters were distributed every three weeks in the same sequence as the educational units.

After the 12-week campaign was completed, a study was done in the three communities to determine the amount of information retained by each community. The pre-program questionnaire was administered again, but with the questions in a different order, to determine the change in nutrition levels in the three communities. The questionnaire was actually administered four times: immediately before and immediately after the project, again three months later, and finally one year following the program. With the final administration of the questionnaire, a dietary recall survey was also taken to define the sample population's food intake habits. Since the questionnaire measured the change in nutritional knowledge, and the dietary survey measured the change in consumption habits, the project could compare the two campaigns' effectiveness in altering attitudes and behavior.

RESULTS:

Traditionally, it has been thought that impersonal mass media, like radio, could not compete with interpersonal communication to change long-term and intimate attitudes and behavior, like eating. Therefore, it could be expected that the classroom group would score higher on knowledge and adoption of nutritional eating habits. In this campaign, however, the classroom and mass media treatment groups learned the nutritional concepts equally well. The classroom group increased their knowledge of nutrition by 53 percent, while the mass media group increased theirs by 54 percent. Curiously, the control group increased their nutrition knowledge by 19 percent. They were not targeted to receive either treatment but were located close enough to the mass media community to receive the radio broadcasts. This message "spillover" might account for the 19 percent increase in knowledge.

The dietary habits of both the classroom and mass media groups changed in a positive way. The classroom group reported eating three times more fruit, fish, and oil, while the mass media group quadrupled its intake of fish, fruit, and vegetables. Both treatment groups decreased consumption of lard, corn, and soft drinks. Interestingly, the control group's eating habits also changed, but for the worse. The consumption of prestigious, less nutritious foods, such as sugar, bread, and soft drinks increased, while consumption of traditional nutritious items like beans and chiles decreased.

OF NOTE:

- The economy may have influenced the change in eating habits because, over the test year, the price of lard almost doubled, while vegetable oil held constant.
- Fish and vegetables were traditionally not consumed before the campaigns.

REFERENCES:

- "A Comparison of Mass Media Techniques and Direct Method for Nutrition Education in Rural Mexico," *Journal of Nutrition Education*, Vol. II, No. 3, July-September 1979, pp. 133-37.
- "Los Medios Masivos de Comunicación un Instrumento Util en la Enseñanza de la Nutrición," *Cuadernos De Nutrición*, Vol. 3, Jul-Ago-Sept. 1978, pp. 287-95.

Clearinghouse on Development Communication
April 1980

(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profile, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

MASS MEDIA NUTRITION-ADVERTISING CAMPAIGN Philippines

TARGET AUDIENCE:	Rural low-income households in the provinces (approximately 2.5 million inhabitants)
OBJECTIVES:	To test the effectiveness of modern marketing and advertising techniques in changing behavior, attitudes, and knowledge related to the nutrition and health of infants
MEDIA:	Radio and limited interpersonal communication
DONORS/SPONSORS:	The Philippine Government, the U.S. Agency for International Development, and the National Media Production Center of the Philippines
DURATION:	Late 1975 to late 1976
CONTACTS:	Dr. Florentino Solon and Dr. Josefina Patron, National Nutrition Council, Ministry of Health and Nutrition, Manila, Philippines; Candy Formacion, Department of Nutrition, University of Iloilo, Iloilo City, Iloilo, Philippines; and Thomas M. Cooke, Manoff International, Inc., 2080 L Street, N.W., Washington, D.C. 20036

DESCRIPTION:

The Mass Media Nutrition-Advertising Campaign was launched in recognition of the sorry nutritional status of many Filipino children and of the inadequacy of using traditional means to counsel the mothers of underweight babies. Apprised of the successful use of advertising and marketing techniques to reach undernourished populations in India and Ecuador with practical tips on diet and food preparation, Filipino nutritionists in the National Nutrition Council decided to try that approach. Their specific goal was to get Filipino mothers to enrich with chopped vegetables, oil, and fish the watery rice porridge (*lugaw*) given to their infants to supplement breast milk. The hidden task, more difficult than spreading messages, was to overturn some ingrained and incorrect — but widely held — ideas about the nutritional needs of the newborn.

The project activities began in 1975, when the U.S. Agency for International Development agreed to provide funds to hire a U.S.-based advertising and social communication firm to work with Filipino planners to design, carry out, and evaluate the campaign. The first step involved the U.S. team and their local counterparts in an exploratory trip through the target site (Iloilo Province, rural population 700,000). Early visits were scattershot attempts to gather impressions while later forays were part of a controlled survey of carefully selected mothers. The baseline survey revealed that only 3 percent of the mothers in the project area had heard of the practice of adding oil to *lugaw* and that none had actually tried it. More mothers (5 and 17 percent, respectively) had tried adding vegetables and fish to the mixture.

Message development, the second stage of the project, proceeded according to principles followed in commercial advertising. Message designers assumed that creating interest in a particular idea requires enlisting sympathy for the proposer of the idea — a feat that involves making sure that the message bearer is perceived as sane, likable, authoritative, and deserving of respect. They also took pains to insure that the change under discussion was not viewed as more sweeping or disruptive than it actually was. These and compatible beliefs informed the six 60-second spot dramas that were eventually developed, tested, revised, recorded and sent out to area radio stations.

The six pre-recorded messages were broadcast in rotation from 15 stations during both the morning and evening hours, the times rural families are most likely to listen. Once the broadcasts began, the locally recruited project workers distributed information on the concepts being promoted and on the campaign itself to the health and nutrition rehabilitation centers in the project area. Related information that had been developed with the help of Filipino doctors in another context was also supplied to the radio stations for distribution in response to listener requests. Broadcasts continued uninterrupted for one year.

Since the ability of radio messages alone to change food patterns was to be tested, no other special educational activities were undertaken during the test period. Doctors, nurses, and rural community workers were informed of the rationale of the campaign, but they were not encouraged to carry out any special education programs.

RESULTS:

A pre-project survey, an interim survey conducted in May of 1976, and a post-project questionnaire were used to evaluate the impact of this campaign. The interim survey, conducted in May of 1976, revealed that the percentage of mothers who added oil to *lugaw* increased from 0 to 23 in eight months. The number adding vegetables rose from 5 to 17 percent, and those adding fish rose from 17 to 27 percent. The comparable figures calculated after the final survey were 24 percent for oil, 17 percent for vegetables, and 27 percent for fish.

The post-project interviews also revealed that radio's role as a source of nutrition information was most strongly evidenced by the target audience's reports of adding oil. On the other hand, participation in and knowledge of existing nutrition and health service programs were more closely associated with adding vegetables and fish, traditional themes of nutrition education. No relationship between adding oil and these programs was found. This suggests that the innovation of adding oil may be attributed to the radio messages.

A separate survey of community health workers in the test area supported the findings of the household survey.

OF NOTE:

- The phrases and idioms that mothers used in the preliminary pre-project interviews were woven into the broadcast scripts and messages.
- Local health and nutrition workers served as hosts and guides to the survey team. For many, the survey offered the first chance they had had in months to visit remote places and talk with the people they are supposed to serve.
- In the first months of the campaign, the "Vegetable Message with Doctor" was played more frequently than the "Oil Message with Doctor" simply because station managers failed to understand that each message must receive the same exposure because each is vital and different from the others. This problem was cleared up in a meeting of station managers.
- The same U.S.-based advertising firm that conducted the campaign in the Philippines conducted similar projects in Ecuador, Nicaragua, and the Dominican Republic, as well as other social communication projects in the United States.
- A mini-drama format was selected because the "novella" (or soap opera) is extremely popular in the Philippines and because it can accommodate the conflict that always arises when an unorthodox idea is presented.
- According to the advertising firm in charge of the campaign, the virtues of spot ads are many. Production costs are low, the passive listener is reached, spots can be inserted within and between the most popular programs, and spots do not tire the listener the way lectures or discussions sometimes do.

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Clearinghouse on Development Communication
July 1978

BREASTFEEDING CAMPAIGN Trinidad and Tobago

TARGET AUDIENCE:	Mothers of infants and pregnant women in Trinidad and Tobago
OBJECTIVE:	To publicize the relationship between breastfeeding and both good nutrition and living standards
MEDIA:	Radio, television, posters, newspapers and periodicals, film
DONORS/SPONSORS:	The Housewives Association of Trinidad and Tobago (HATT), the Association of Advertising Agencies of Trinidad and Tobago with support from the Ministry of Health, the Caribbean Food and Nutrition Institute (CFNI), and the Medical Association of Trinidad and Tobago
DURATION:	Conceived and implemented in 1974; scheduled to be re-run in late 1977
CONTACT:	Alison White, Nutritionist, 13 Santa Anna Gardens, Maingot Street, Tunapuna, Trinidad

DESCRIPTION:

The *Trinidad and Tobago Breastfeeding Campaign* involved various private and governmental agencies in an effort to use the national mass media to promote breastfeeding. Coordinated by HATT with the support of the Advertising Agencies of Trinidad and Tobago, the campaign was planned in the early months of 1974 and officially launched in May.

Employees of the involved advertising agency received a three-page brief designed to describe the nutritional and economic aspects of breastfeeding and to convince them that they had a product worth selling. Once the advertising texts and artwork for the campaign were developed, clinic staff members and other health personnel were also briefed about the project and brought up to date on the benefits of breastfeeding.

Radio and television spot announcements reiterated messages carried by newspapers, posters, and handbills. The campaign was managed by media professionals who coordinated nine television programs and a series of daily five-minute radio broadcasts (called "Keeping Abreast with Man's History") with press coverage. Discussions among schoolchildren and community groups were also part of the campaign, as were both centrally located and mobile library displays.

A key element in the breastfeeding project was the donation of time, expertise, and services by advertising agencies, governmental departments, media, commercial firms, and private citizens. These gifts were supplemented by rate reductions and other production advantages.

RESULTS:

CFNI's two-phase evaluation of the project entailed five objectives: (1) to find out what portion of the target audience had been reached; (2) to determine how much the messages influenced those who heard them; (3) to ascertain whether the women reached by the messages agreed with their content; (4) to discover whether nursing women had altered their breastfeeding practices; and (5) to obtain further information on Trinidadian women's breastfeeding practices.

On the basis of its evaluation, which constituted CFNI's major contribution to the program, the CFNI staff deemed the breastfeeding campaign a success and concluded that the components of the campaign ought to be made permanent features of Trinidad's nutrition education program. It also affirmed the effectiveness of the multi-media approach; the team further recommended that even more time and space in the mass media be devoted to this vital issue.

OF NOTE:

- The wife of Prime Minister Manley of Jamaica endorsed the breastfeeding campaign in a pre-arranged tape-recorded conversation with HATT's president. The endorsement was later aired in support of the campaign.
- Fathers of infants were invited to a Father's Day function at which the merits of breastfeeding were discussed.
- Short films showed mothers and nurses in clinics testifying to the nutritional soundness of breastfeeding.
- The *Trinidad and Tobago Breastfeeding Campaign* will be covered in a forthcoming book by Dr. Derrick B. Jelliffe and E.F. Patrice Jelliffe on breast milk in the modern world.
- Radio stations donated more time to spot announcements than they had first promised to devote to the breastfeeding project.

REFERENCES:

"The Trinidad and Tobago Breastfeeding Campaign," Alison White, paper presented at the IXth Technical Group meeting of the Caribbean Food and Nutrition Institute, Kingston, Jamaica, September 1976.

Clearinghouse on Development Communication
June 1977

NUTRITION ADVERTISING CAMPAIGN Tunisia

TARGET AUDIENCE:	Poor families in depressed rural and urban areas
OBJECTIVES:	To test the effectiveness of combining existing face-to-face education with inexpensive radio nutrition-education
MEDIA:	Radio and interpersonal communication
DONORS/SPONSORS:	U.S. Agency for International Development and Tunisia's National Institute of Nutrition (NIN)
DURATION:	Conceived in 1975; pilot phase concluded in 1978; ongoing under NIN auspices
CONTACTS:	Sara J. Munger, Synectics Corporation, 4790 William Flynn Highway, Allison Park, Pennsylvania 15101, U.S.A.; Dr. Zouhair Kallal, Director, National Institute of Nutrition and Food Technology, 11 Rue Aristied, Briand, Bab Saadoun, Tunis, Tunisia

DESCRIPTION:

A 1975 national nutrition survey conducted by Tunisia's National Institute of Nutrition (NIN) showed that several serious nutritional problems plagued the poor majority of Tunisia. Principal among these were vitamin deficiencies stemming from childrearing practices whereby babies are kept swaddled and unexposed to sunlight, infants are given no nutritional supplement to breastmilk, and young children are not fed protein-rich foods. Confirmation of these problems spurred NIN to consider sponsoring a media campaign aimed at informing parents of infants about simple nutritional practices capable of correcting the deficiencies identified and at motivating them to try such practices. At the same time, the Development Support Bureau of U.S. AID had contracted a U.S. consulting firm to conduct an experimental project to determine ways of combining the use of mass media with existing non-formal education. After reviewing Colombia, Honduras, and Tunisia as potential sites for this project, AID picked Tunisia as the most representative and receptive project site.

Radio was selected as the medium for this campaign because it seemed the best means of reaching the largest number of rural mothers. Early in the project, the consultants and NIN decided to use short spot messages, rather than longer discussion programs. This decision was based in part upon earlier experiments in Nicaragua and the Philippines, which showed that repeated, simple messages can be effective in educating large populations about nutrition. The radio messages were developed systematically and were pretested at local Mother and Child Health clinics (MCHs). Music and lead-ins were added by the National Radio Broadcasting faculty.

Five basic themes were selected: the importance of exposing infants to sunlight, babies' need for supplemental feeding in the first year of life, the place of eggs and protein foods in the diets of healthy mothers and infants, the addition of vegetables to the infant's and the mother's diet, and the importance of breastfeeding. The "fruits and vegetables" theme, for example, received seven different treatments and the "use protein" theme received nine. The bearer of these messages is the fictitious and now widely recognized "Dr. Hakim," a respected figure who dispenses practical advice (and whose name means "wise man" in Arabic).

Scheduling of broadcasts was organized to ensure that both fathers and mothers could hear the messages. At first, two messages (each lasting from one to two minutes) were broadcast three times each day. But during the program's early weeks, criticism from educated Tunisians prompted programmers to cut scheduling back to only two programs per day. This criticism related to the unavailability of some foods endorsed in the programs and also reflected a belief of some Tunisians that short, oft-repeated messages insulted the Tunisian intelligence. These complaints were softened, however, when neighboring countries began to express interest in duplicating the Tunisian program and when NIN staff responded directly to published criticisms and subsequently won press support.

The impact of the educational campaign was investigated by means of interviews of mothers who attended the MCHs. The project called for the selection of 16 clinics: eight clinics in which a half-day seminar would be given to

midwives and nurses to reinforce the ongoing nonformal nutrition education and eight clinics in which radio broadcasts would not be supplemented with seminars. A questionnaire was prepared and pretested for use at the end of six months of broadcasting to determine participants' knowledge, attitudes, and practices related to the five themes stressed in the project.

RESULTS:

The most clearly demonstrable success of the program has been the adoption of mass communication as an ongoing nutrition-education strategy by the Tunisian National Institute of Nutrition. The project stems from a relatively modest investment in training and program development and takes place in a setting in which media advertising of any nature was practically non-existent. This commitment to continuing the communication demonstrates, perhaps more tangibly than any evaluation statistics, the belief of the Nutrition Institute personnel that communications can make an important contribution to extending nutrition education to large numbers of the rural poor.

Data from a variety of sources, including both anecdotal comments and in-depth interviewing, indicate that the program's central character, Dr. Hakim, is a widely recognized figure in Tunisia. Eighty-eight percent of the mothers interviewed identified Dr. Hakim when asked who delivered the nutrition messages via radio. Through Dr. Hakim, nutrition has become a topic of general concern throughout the country. The ability of the Dr. Hakim program to reach Tunisian society has been concretely established.

The complexity of collecting reliable evaluation information on specific changes in people's nutritional behavior makes judgments on the educational success of the program less conclusive. Along with responses to certain items on the evaluation questionnaire, clinic reports of sharp increases in the use of SAHA, a supplemental food recommended in the radio programs, suggest that mothers' knowledge and perhaps even behavior were positively influenced by the program. If it is accepted that many of the objective indicators may be flawed, the self-reported increases in early exposure of infants to sunlight are positive signs of possible success. Many questions remain to be answered about the ability of communications to actually alter how people act, and this program lends increased support to the need for more creative and innovative measurement strategies.

OF NOTE:

- Although this project was conducted with the aid of consultants, basic decision-making was not taken out of the hands of Tunisians.
- No control could be exercised over exposure to the radio messages. (Most families in Tunisia own at least one radio.)
- The Tunisian firm, El Amouri Institute in Applied Psychology, was subcontracted to assist in message development and data collection.
- Radio programs were produced in Arabic, so although the contribution of the contractor to final message content was somewhat limited, the messages did not suffer from the "translation effect."
- Radio programs were not rapid-fire advertisements, but rather short lectures on selected nutrition-related topics.
- Strictly speaking, the project design used is valid only if two distinct groups are available for the experiment, which was not the case since health workers talked to control groups.
- The broadcast's powerful effect was probably due in part to the fact that the environment into which messages were sent was media-starved.
- Seminars and special events were designed to motivate clinic workers to link their existing educational efforts to the radio programs.

REFERENCES:

"Mass Media and Nonformal Nutrition Education: Final Study Report," Sara J. Munger, Document C-T0696-Y, Synectics Corporation, October 1978.

Unpublished project documents, dated 1976-1978.

"A New Voice in the Village — Radio Nutrition Education in Tunisia," William Smith, a videotape produced by the Academy for Educational Development for the Agency for International Development, 1979.

Clearinghouse on Development Communication
April 1979

CENSUS COMMUNICATION SUPPORT PROJECT

Afghanistan

- TARGET AUDIENCE:** Population of Afghanistan
- OBJECTIVE:** To inform the population of the census and motivate them to cooperate with the first national population count
- MEDIA:** Interpersonal communication, audiovisual aids, print, radio, television, newspaper, film
- DONORS/SPONSORS:** United Nations Fund for Population Activities (UNFPA), Government of Afghanistan, UNDP Development Training and Communication Planning (DTCP)
- DURATION:** 1976 - 1979
- CONTACTS:** Mr. Najib M. Assifi, Planner/Programmer for Population Programs and Communication Campaign Specialist, UNDP/DTCP, P. O. Box 2-147, Bangkok, Thailand

DESCRIPTION:

The Census Communication Support Project was launched in 1976 to assist the government of Afghanistan in conducting its first national population count. Its overall objective was to motivate the people of Afghanistan, especially the heads of households, to cooperate with the census and to give the enumerators accurate answers to the questions on the census questionnaire. Achieving this major objective required that the entire population be reached before the enumeration. In addition to being contacted, they had to be given the following information: the time of the enumeration, how the census would be conducted, the questions that would be asked, the purpose of the census, and how the population could contribute to the success of the census.

Since scientific research data were largely unavailable in Afghanistan at that time, the communication support program had to begin by identifying the various mass media in the country and surveying their audience groups. These included press, radio, television, and film. Given the low literacy rate (estimated at 10 percent) and the widespread poverty (the annual per capita income was estimated at US \$160), readership figures were low. Television and film, while popular media, could not be heavily relied upon owing to their limited availability. The program therefore chose a strategy based on interpersonal communication, basically an extended field-worker operation. The role of the mass media became one of support to the major effort on the interpersonal level.

The Central Statistics Office of Afghanistan, which was responsible for the census, established an Office for Information and Publicity in May 1977. Outside assistance came from the UNFPA, which provided the salaries for a project manager and two consultants, and salary supplements for 22 central and 28 provincial communicators. The central office was responsible for the coordination of the national communication campaign, for its implementation in Kabul, and for the production of communication materials. The provincial communicators were responsible for the planning, coordination, and implementation of communication activities at the local level. Since their experience in communication work was limited, both the central and provincial communicators had to be trained in basic communication skills.

In the summer of 1977 the first campaign plan was drawn up to ensure that the communication materials would be used as effectively as possible. A time schedule was developed for all communication activities and the distribution of the communication materials. In October 1977, a pilot census was conducted for the purpose of testing the census operation and the various communication materials such as flip-charts, posters, folders, and leaflets produced for this purpose by the Central Office. Each field communicator had a set of these materials to illustrate his explanations.

The communication campaign was gradually intensified and reached its peak during the last three months before the census. It was primarily during this period that mass media were used to spread information about the census. Part of the staff in the Office of Information and Publicity were split up in mobile teams to assist the field communicators in reaching outlying areas. The remaining staff members wrote articles for the national newspapers, scripts for radio programs, and organized a television quiz on the census. A census song, composed specially for the occasion, was recorded and played over the radio. Newsreels about the census were shown in the cinemas and all mass media covered the news aspects of the census.

RESULTS:

The result of the pre-test campaign confirmed the assumption that the communication efforts would have to be conducted mainly at the interpersonal level. Mass media were not very effective; none of the teams working in rural and nomadic areas reported any significant impact of radio, even though news about the pilot census had been broadcast on virtually every existing radio program.

The final census took place June 1 - July 15, 1979. The final figure for the population of Afghanistan given was 15,540,000.

From July to August 1979, the Central Statistic Office conducted a sample survey to evaluate the impact of the Census Communication campaign. The survey, which was implemented through 66 local census officers in 13 provinces, covered 3,254 people in both urban and rural areas. The results show that 97.7 percent of the sample had heard about the population census before the census enumeration began. Out of this 97.7 percent, 34.9 percent received their information mainly from radio and other mass media such as newspapers and magazines. The majority of the sample population (62.1 percent) were informed by face-to-face communication through mobile teams, gatherings, seminars, etc.

OF NOTE:

- The national communication campaign was waged under the slogan "Beshmarim ta bedanim" --"Let's count to know." This slogan appeared on posters and banners used throughout the country.
- When a new government came to power in 1978, the census was postponed for one year.

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UNDP Developing Training and Communication Planning Report, Nos. 376,377, 378 and 379. UNDP/DTCP Resource Base, Bangkok, Thailand. May-August 1980.

"Communication Support for Census Taking." Asian-Pacific Population Programme News, Special Issue, 1980-1981 Census Round. Economic and Social Commission for Asia and the Pacific (ESCAP), December 1981, Bangkok, Thailand.

Clearinghouse on Development Communication
April 1983

PROFAMILIA: FAMILY PLANNING IN COLOMBIA

Colombia

TARGET AUDIENCE: Colombians of reproductive age

OBJECTIVE: To provide information, education, and services in family planning

MEDIA: Radio, audiovisual materials, print, film, slides

DONORS/SPONSORS: International Planned Parenthood Federation (IPPF)

DURATION: 1965 - ongoing

CONTACTS: IPPF - Western Hemisphere Division, 105 Madison Avenue, New York, N.Y. 10016, USA; Juan Braun, Graduate School of Education, Harvard University, Longfellow Hall, Cambridge, MA 02138, USA

DESCRIPTION:

PROFAMILIA, a non-profit family planning organization and affiliate of the International Planned Parenthood Federation, began its work in Colombia in 1965. The organization's objectives are: 1) to offer information and services in family planning; 2) to train medical and paramedical personnel in family planning; 3) to provide advice and counseling; 4) to promote research in all areas of family planning; 5) to contribute to the socio-economic development of Colombia in the areas of health and welfare; and 6) to cooperate with other public and private institutions in the planning and development of programs with similar aims.

To achieve these objectives, PROFAMILIA follows a strategy which includes offering services through clinics, community-based distribution (CBD) programs and social marketing; and training medical and paramedical personnel in sterilization techniques, nursing, and ways to teach the public about family planning, sex education, and where to find services. CBD programs, initially in the rural areas and later in the lower income areas of the major cities, utilized trained leaders from the community to promote family planning in their neighborhoods, to sell oral contraceptives, condoms, and spermicides at subsidized prices, and to refer people for other methods to the nearest clinic. In 1973, PROFAMILIA began the marketing of contraceptives with the aim of keeping the commercial price of contraceptives low and making contraceptives more easily obtainable commercially through such outlets as drugstores, cooperatives, etc.

Information and communication media are heavily used to support the program. Printed materials include colorful, easy-to-read pamphlets; manuals for PROFAMILIA staff and volunteers, including a cartoon manual for the community leaders who act as educators and distributors of contraceptives; and specialized sophisticated pamphlets aimed at the decision-makers of Colombia on such topics as overpopulation and the unwanted child. Audiovisual materials include plastic or wood display stands for use in PROFAMILIA's distribution programs (community and commercial); slide sets on topics such as venereal disease, contraceptive methods, and sex education for children; posters; and a flannelgraph with carrying case and figures which can be used to illustrate family life, nutrition, health, and family planning. When funds are available, PROFAMILIA broadcasts 30-second radio spot announcements using a brief soap-opera-type theme, urging people to use PROFAMILIA's services. The spots are developed by a local advertising company and aired up to 15 times a day nationwide on the three major networks of Colombia. Also, when funding permits, PROFAMILIA uses specially produced slides in cinemas to advertise its services.

RESULTS:

Between 1965 and 1978 the clinics reached 740,761 women. In 1978 PROFAMILIA's voluntary sterilization program provided services to 40,352 women and 658 men. By December 1978 PROFAMILIA had 2,967 community-based distribution posts throughout the country which, during 1978, distributed 1,798,888 cycles of oral contraceptives and 732,129 condoms. Of the total 3,601,549 cycles of oral contraceptives distributed, 1,548,482 were sold directly through the social marketing programs.

Since 1976 PROFAMILIA has had a Family Planning Training Center for Nurses and Auxiliary Nurses which, by the end of 1978, had trained 33 nurses and 14 aides from 10 Latin American countries in clinical procedures.

Since 1978, PROFAMILIA has developed a community self-help program in two Colombian states, combining a parasite control project with the promotion of basic health, adequate nutrition, and family planning. This project uses rural primary school children as rural promoters and provides basic medicines (including contraceptives) to their parents at low cost.

OF NOTE:

- Through their activities and influence in getting the government involved in family planning, PROFAMILIA can be credited with the lowering of the population growth rate in Colombia from 3.2 percent in 1964 to 2.1 percent in 1978.
- PROFAMILIA has been the first organization in Latin America to 1) use radio to motivate the public about family planning (despite cries heard by family planning leaders in other Latin American countries at the time--1969--that "you cannot sell family planning as you do Coca Cola") and 2) raise resources locally via the sale of courses, short programs, and services to industrial and commercial enterprises.
- PROFAMILIA had hoped to work with IPPF and Televisa/Mexico to produce support materials for the television soap opera "Acompañame" (See Project Profiles, "Social Values Through TV Soap Operas"). However, showing of the series was halted by the Colombian censors.

REFERENCES:

"PROFAMILIA: The Pioneering IPPF Affiliate in Colombia" Unpublished paper, International Planned Parenthood Federation. (no date)

Clearinghouse on Development Communication
April 1983

APROFAM FAMILY PLANNING PROGRAM Guatemala

TARGET AUDIENCE:	Ladino and indigenous populations of Guatemala, particularly in rural areas
OBJECTIVES:	To increase knowledge and use of family planning practices, especially among Guatemala's rural and ethnically diverse populations
MEDIA:	Radio, television, posters, newspaper advertisements, print materials, interpersonal communication
DONORS/SPONSORS:	Asociación Pro-Bienestar de la Familia (APROFAM); U.S. Agency for International Development; the Pathfinder Fund
DURATION:	APROFAM's Information, Education, and Communication (I-E-C) program for family planning begun in 1976; ongoing
CONTACTS:	Roberto Santiso, Executive Director, APROFAM, Apartado Postal 1004, Guatemala City, Guatemala; Dr. Jane Bertrand, 7722 Panola St., New Orleans, Louisiana 70118, U.S.A.

DESCRIPTION:

During 1977-78 the Asociación Pro-Bienestar de la Familia (APROFAM), a private family planning association in Guatemala, carried out a nationwide communication program for family planning, using mass media and interpersonal channels to reach both ladino and indigenous communities, particularly in rural areas. Guatemala's population of approximately seven million is divided almost evenly between the Spanish-speaking ladinos and the indigenous or Indians. These populations differ significantly from each other in such aspects as openness to change, use of traditional dialect, dress, standard of living, and cultural practices. The family planning communication campaign was based on a 1976 research study of selected rural areas that APROFAM had conducted to determine differences between the ladino and indigenous groups with regard to knowledge, acceptance, and practice of family planning. The research results showed that actual and potential acceptance of family planning, as well as interest in obtaining further family planning information, were greater among the more "Westernized" ladino population. Using these results, APROFAM designed an Information, Education, and Communication (I-E-C) program to reach both rural groups, with special emphasis on reaching the less accessible indigenous population.

Radio spot announcements, the core of the I-E-C program, were pretested among members of the target populations. The radio spots for the ladinos were developed in Spanish and included explicit information about obtaining family planning services. Radio spots for the indigenous were translated into two of the four major Indian dialects (Quiché and Kekchí) and concentrated on the more basic issues: that family planning exists, is voluntary, is reversible, and can be beneficial to the family. A set of four posters was designed to reach the Indian population; while they depicted families in native dress, the messages were in Spanish. A poster directed to the ladino population addressed the importance of husband-wife communication. Other components of the campaign included a television spot, aired weekly over a period of five months, intended to reach the nation's opinion leaders; a simplified folder that covered the most commonly-used contraceptive, intended for audiences with low literacy; and occasional newspaper advertisements, intended as much to balance any unfavorable press coverage as to encourage family planning use.

In conjunction with these communication activities, APROFAM sponsored several community-based distribution projects that provided a vehicle for interpersonal communication activities, such as small group discussions, home visits, and public meetings. However, these I-E-C activities were not expected to reach as large a percentage of the target population as were the mass media.

RESULTS:

In mid-1978, APROFAM, in collaboration with the Community and Family Study Center of the University of Chicago, carried out a follow-up research survey to obtain feedback on I-E-C activities and determine whether the anticipated changes had taken place in the two target populations. The ethnic differences with regard to family planning uncovered in APROFAM's 1976 study were underscored in the 1978 survey. Results showed that, at the end of the two-year period, there had been significant increases in knowledge and practice of family planning among the ladinos studied. Among the indigenous, although there was a marked decrease in strong resistance to family planning, no advances had been made in knowledge of specific methods, and use of contraceptives remained close to zero. A far greater percentage of ladinos than indigenous had been exposed to family planning messages via one or more mass media or interpersonal channels, and ladinos were more likely to remember what the messages said (specifically radio), sometimes repeating themes or slogans verbatim. Among the ladinos, use of contraceptives was higher among those with greater exposure to family planning messages, and informal communication among ladinos about family planning increased with exposure both to mass media and interpersonal channels of communication. Among the indigenous, this relationship held only for interpersonal channels.

Among the ladinos, 96.3 percent who had heard family planning radio spots approved of the broadcasts, and 100 percent of those who had seen a television spot favored this topic and method of communication. Only 60 percent of the indigenous approved of having family planning messages played on radio; no indigenous had seen the television spot. While 81.4 percent of the ladinos wanted more information on family planning, this was true of only 37.4 percent of the indigenous, whose major objections were religious.

Several implications have been drawn from the research results, some of which will have direct consequences for a pilot project that has recently been started in indigenous areas. As traditional I-E-C activities prove less relevant to indigenous populations, new strategies and methods must be developed, such as: 1) thorough pretesting of messages and materials for both appeal and comprehension, based on an understanding of indigenous needs and motivations; 2) use of different, perhaps less direct, approaches, with less explicit family planning information, presented in combination with other subjects perceived by the indigenous to be in their direct interest (e.g. health of children, nutrition); and 3) greater use of person-to-person communication, due to the private character of the subject for the indigenous and the greater need to establish a certain level of confidence between the givers and receivers of the message.

OF NOTE:

- The community distribution program was implemented to increase the availability of low-cost contraceptives and eliminate some of the problems associated with an entirely clinic-based system, such as limited hours of availability of family planning services, distance, and expense of travel. In addition, employment of an indigenous distributor would lower distrust of ladino-staffed clinics among the indigenous. A second model of community-based distribution being implemented involves using family planning promoters with various agricultural groups that have expressed interest in establishing family planning programs for their workers.
- Some of the findings of the research dispel certain stereotypes regarding family planning in Latin America. For example, Roman Catholics were no less likely than others to know about, approve of, and use family planning, although people of any denomination who consider themselves "very religious" lag behind the less religious on all three points. In addition, men are as likely as women to have heard about, approve of, and want more information about family planning. Finally, rather than younger people being more open to family planning, it was found that interest in and use of family planning appear to peak between ages 30 and 34, with those younger and older having less tendency to know about or use contraceptives.

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Clearinghouse on Development Communication
September 1979

**FAMILY PLANNING ASSOCIATION OF HONG KONG
HONG KONG**

- TARGET AUDIENCE:** Hong Kong residents in or about to enter their reproductive years.
- OBJECTIVES:** To advocate, promote, and provide facilities for contraception; to educate the public, especially young adults, in family planning; and to conduct research to develop new contraceptive methods and approaches to family planning.
- MEDIA:** Radio, TV, posters, brochures, exhibitions, sporting events, photo contests, public interviews, videotapes, newspaper and magazine articles, cartoon strips, songs, promotional items (T-shirts and coin purses).
- DONORS/SPONSORS:** Hong Kong Government, Community Chest of Hong Kong, International Planned Parenthood Federation, and other private and nonprofit national and international organizations.
- DURATION:** Founded in 1950, ongoing.
- CONTACT:** Mrs. Peggy Lam, Executive Director, The Family Planning Association of Hong Kong, 184-192 Lockhart Road, G/F-3/F, Hong Kong

DESCRIPTION:

The Family Planning Association of Hong Kong (FPAHK), founded in 1950, was one of the founders of the International Planned Parenthood Federation. The Government of Hong Kong began to partially fund its activities in 1955, and today contributes what now equals 33 percent of the Association's recurrent expenditures. Numerous local and international organizations and associations also support FPAHK activities.

FPAHK's wide-ranging program includes education and information services, clinical services, specialty services such as pre-marital checkups, resource development and production, and research and evaluations. It was a pioneer in the promotion of family planning, family life activities, and sex education in Hong Kong. The Association's Women's Clubs enable the promotion of family planning and family life education at the grass roots level through an integrated community approach. Over the years, the Association's role has shifted from the direct provision of programs in schools to training and enrichment programs as well as to developing resource materials.

Education campaigns are designed to correct misconceptions about sexual matters, help parents teach their children about sex, inform young couples about contraceptive choices, and introduce the study of sexuality at the university level. Television interviews and discussions, seminars, lectures, and courses are used to facilitate the dissemination of educational information and materials.

FPAHK has been particularly aggressive in reaching out to the community with information campaigns. The most recent effort was the 1984 "Family Planning and Health Campaign," which was conducted in response to the 1982 Knowledge, Attitude and Practice Survey. The survey showed that while 72.3 percent of Hong Kong residents currently practice some form of family planning, only 59.8 percent use contraceptives effectively and properly. The goal of the campaign was to reinforce the importance of undergoing annual physical checkups and to encourage people to continue using a correct contraceptive method. To motivate contraceptive users to have annual checkups, FPAHK used TV and radio spots and interviews; posters, campaign buses and billboards; public lectures, a 13-episode radio special combined with an information pamphlet and cartoon series; extended clinic hours during special "clinic weeks;" and a 20 percent discount for laboratory tests as a result of the checkup. The campaign will be continued in 1985 and 1986.

Another well-planned promotion was the 1983 "Male Responsibility" campaign. It featured a Chinese folk hero and kung-fu master, and was planned in four distinct phases, each emphasizing a different approach. The first phase was a mass media promotion with TV episodes, a cartoon series, newspaper and magazine articles, and distribution of promotional T-shirts. The second phase comprised a series of exhibitions featuring computerized family planning messages, video shows, free checkup services, a quiz, and souvenirs. A "Family Planning Cup Mini-Soccer Tournament" sponsored by FPAHK was the third promotional phase; the concluding phase, a "Happy Family Photo Contest," promoted family togetherness and cooperation.

The Association's video production facility makes videotapes for exhibitions, conferences, schools, social welfare agencies, and government departments. Resource development also includes slidetape productions, pamphlet design and production, a quarterly newsletter, a yearly periodical, Family Life Education Review, distributed to teachers, social workers, counselors and others in related professions.

RESULTS:

Based on a 1982 survey of the Hong Kong population, thirty years of work in family planning by FPAHK has achieved enviable results--widespread knowledge of contraception, a generally favorable attitude toward its use, and a contraceptive practice rate among the highest in the world. Additionally, the small family norm--"Two is Enough"-- has been well accepted. Through the FPAHK's efforts, the birth rate has dropped from 39.7 per thousand in 1956 to 14.4 per thousand in 1984. Only among the most recent immigrants (settled in Hong Kong for less than five years) has acceptance of family planning or use of contraception been somewhat lower. Since 1982, its role has been to train teachers and social workers in family life education. An evaluation of these training programs was done in 1983 which revealed that this approach was cost-effective because teachers and social workers have a multiplier effect.

Campaigns such as the "Male Responsibility" promotion included rigorous formative and summative analysis components. Male clinics recorded a 42 percent increase of new clients over the same time period a year before the campaign. Among these new clients, 41 percent said the promotional activities prompted them to come. Moreover, the number of applicants for vasectomies increased by 81 percent in this same compared time period. FPAHK education programs also show increased use with a two-fold increase between 1982 and 1983 in the number of Sexual Awareness Seminar participants--particularly among College of Education students.

One year after the inception of the "Family Planning and Health Campaign" the number of new female family planning participants who had checkups was tripled in comparison to figures from the previous year.

OF NOTE:

- As well as education and information activities, the FPAHK supports programs in mentally handicapped and deaf family planning needs, immigrant and refugee family planning assistance, a youth advisory service, and a youth volunteer development program.
- A study of FPA clinics shows most of them have reached their peak cost-effectiveness with most locations being strategically convenient locations to maintain high-use levels.

REFERENCES:

JOICFP News, January 1985. "Family Planning & Health" Campaign by Peggy Lam, HK
The Family Planning Association of Hong Kong, Annual Reports 82/83 and 83/84.

Clearinghouse on Development Communication
June 1985

THE JAMU PROJECT Indonesia

TARGET AUDIENCE:	Javanese and Balinese males of reproductive age
OBJECTIVES:	To promote acceptance of family-planning concepts and sales of condoms
MEDIA:	Radio spots, print, and interpersonal communication
DONORS/SPONSORS:	Prosperous Indonesia Foundation (YIS); World Neighbors; the U.S. Agency for International Development
DURATION:	From 1974 to the present
CONTACTS:	Prosperous Indonesia Foundation (YIS), Jakarta, Indonesia; Lukas Hendrafta and David Piet, Council of Churches in Indonesia, P.O. Box 2357, Jakarta, Indonesia

DESCRIPTION:

In 1972, the Indonesian National Family Planning Coordinating Council (BKKBN) decided to enhance family-planning efforts in Java and Bali by working outside the network of clinics, which are run by medical professionals and serve up to 35,000 people each. The decision reflected two assumptions: that the existing clinics could not properly meet the needs of such large clientele and that family-planning efforts should be made a part of the cultural mainstream.

The second assumption, along with word of relevant success stories from elsewhere in the developing world, led planners to consider marketing condoms through an established commercial system for the distribution of medicines. Family-planning programs in India, Sri Lanka, and Kenya had already used commercial distribution systems successfully. In each of these cases, however, a new distribution system had been created especially for contraceptive distribution. The Prosperous Indonesia Foundation envisaged, in contrast, a commercial distribution effort integrated into a familiar and established network.

For involvement in this project, YIS selected a single producer of *jamu*, whose name refers to a type of traditional herbal medicine still widely used in Indonesia. Half of the products of the *jamu* producer chosen to participate in the project are cures for health problems. The other half of the product line consists of sex-related products (cosmetics and putative enhancers of sexual desire and sexual performance). The hope was that the association of health with love and sexuality would help involve in family planning those males who are seldom lured to family-planning clinics.

Various media were used in the *Jamu Project*. Radio spots contained pitches for a virility potion ("Drink *SEKHOT*" ("sex hot")) followed by the exhortation to "Use *KARET KBs*" (the condoms distributed as part of the project) . . . "Thoroughly enjoy yourself and show your prowess while giving pleasure and protection from unwanted pregnancy to your partner." The promotional posters and leaflets used by YIS bear a family-planning message and depict a happy, healthy family with two children. Illustrated instructions are included in every condom package.

The orientation of the seller of *jamu* products toward the purchaser has been characterized as personal and friendly. To sell their wares, most *jamu* salespeople engage potential customers in small talk.

RESULTS:

Since 1974, sales of condoms have averaged less than 1,000 gross per month, which has been judged by the International Committee on Applied Research in Population to be "far short of the level needed for program self-sufficiency." Only about 40 percent of the eligible retailers of *jamu* were handling *KARET KB* as of September 1975. So, to boost sales and enthusiasm the *Jamu Project* undertook an intensive advertising campaign from October 1975 to March 1976. In the months of October to December alone, 100 radio stations broadcast over 50,000 advertisements on the subject.

As a result of the intensive advertising, the monthly sales reportedly increased to over 1,500 gross per month, and the percentage of eligible retailers selling the condoms increased from 40 percent to 49 percent. However, when the campaign ended, sales dropped back to their previous level. Of 625 recently surveyed retailers in Jakarta, 70 percent felt that the low subsidized price (and resulting assumptions of inferior quality) acts as an important barrier to increased sales. However, evidence from other countries shows that subsidized condoms can sell well if supported by sustained advertising. Accordingly, project directors are investigating the possibilities of launching such an advertising effort.

OF NOTE:

- The *jamu*-marketing scheme was the first project to be supported by the Prosperous Indonesia Foundation (YIS), a private organization created by law in February of 1974 to "increase the welfare of the Indonesian people through the execution of health programs, population, and community development."
- By choosing a well-established and highly successful company to market the condoms, the *Jamu Project* staff kept distribution costs down but also necessarily forfeited some decision-making power: the company employees feel that they know much more than the project staff does about marketing techniques and do not feel compelled to take advice from novices.
- Traditionally, *jamu* was prepared only by local *dukuns* (herbal specialists) according to traditional recipes. Today, the large *jamu* producers are modern organizations with sales averaging millions of dollars per year.
- The final distribution points for *jamu* products are street sellers, mobile vans, and roadside stands.
- The expression "You are a *jamu* seller" is reported to mean "You talk a lot."
- Planners felt that the "bartender"-type relationship the *jamu* seller tries to establish with the potential buyer might work more effectively than more formal and intimidating clinic-based education to involve men in family planning.

REFERENCES:

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Clearinghouse on Development Communication
January 1979

THE MODEL FAMILY PLANNING PROJECT IN ISFAHAN

Iran

TARGET AUDIENCE:	Iranian women in both urban and rural districts
OBJECTIVES:	To increase women's acceptance of contraceptives and to stimulate continued use on the part of those initially enlisted in family planning programs
MEDIA:	Banners, mailings, films, radio, TV, print, exhibitions
DONORS/SPONSORS:	Iran Population and Family Planning; Iran's Ministry of Health
DURATION:	Model phase lasted from June 1972 to June 1974; similar projects are now being introduced elsewhere in Iran
CONTACTS:	Dr. Medhi Loghmani, Deputy Director, Ministry of Health, 212 Abbas Abad St., Isfahan, Iran; Roy C. Treadway, Illinois State University, Normal, IL 61761, U.S.A.; Robert Gillespie, Director, Population Communications, 295 West Green Street, Pasadena, CA 91105, U.S.A.

DESCRIPTION:

The *Isfahan Model Family Planning Project* is an example of an integrated approach to family planning. Taking place in Iran between June 1972 and June 1974, the project simultaneously used five means of reaching the target audience: (1) public and private clinics; (2) local pharmacies and supply outlets; (3) full-time medical and paramedical family planning field workers; (4) part-time community agents; and (5) mass communications channels. All facets of the program had been previously tested in Najafabad and Shahreza (the study districts) and stimulated varying degrees of family planning acceptance. Designers of this project hoped to discover a workable combination of various project components.

The Iran National Family Planning Program that was launched in 1967 and the Isfahan Communications Project that began in August of 1970 paved the way for the Model Project. The family planning segment of the eight-month Communications Project used radio, films, exhibits, mailings, leaflets, banners, newspaper and magazine inserts, and an information van to generate new demands for family planning services. A concurrent effort, the General Functionary Project, furthered the goals of the Communication Project by educating selected members of the target group on the socioeconomic aspects of population growth, the benefits of family planning, and the use of contraceptive methods.

Representatives of some government and semi-government agencies (The Red Lion and Sun Association, the Imperial Organization for Social Services, and others) worked closely with the Model Project personnel in setting up 20 IUD-insertion centers and 49 pill and condom supply centers in 41 villages.

RESULTS:

Overall, the Model Family Planning Project is considered a success: the number of married women between the ages of 15 and 44 who used contraception increased between June 1972 and June 1974 from 6 to 21 percent. The discontinuation rates (23 percent for IUD recipients and 20 percent for pill users) turned out to be fairly high, but the motivational and educational impacts of the project also appear great. Almost all of the women studied (96 percent) are aware of the existence and availability of contraceptives, while 48 percent have tried at least one method.

Evaluators held that trained medical and paramedical personnel had the most direct impact on the women's receptivity to contraception. The role mass communications played in reinforcing interpersonal communication — the messages received by friends and family who in turn relayed them to the women — remains a key, if unknown, variable. Follow-up surveys were not designed to measure the effectiveness of film, pamphlets, radio spots, and magazine and newspaper inserts at rallying support for the Model Project or of the message itself.

OF NOTE:

- Local community agents — schoolteachers, village leaders, granny midwives, agriculture extension agents, barbers, Literacy Corps workers, and taxi drivers — were enlisted to increase the number of people who accepted pills, condoms, and IUDs. These agents, most of whom were unpaid, recruited only 20 percent of the new acceptors, but the support and credibility they lent to the program were deemed essential to its success.
- All media messages focused on two questions: "Which is best, two or three children?" and "Which method is best, the loop, pill, or permanent method?"
- During the mass media campaign, a UNESCO-sponsored film crew shot a film, "Mass Media and the Field-Worker," on how the mass media reinforced interpersonal communication in this effort. Copies may be obtained from the Division of Development of Application of Communication, UNESCO, 7 Place de Fontenoy, 75700 Paris, France.

REFERENCES:

"The Model Family Planning Project in Isfahan, Iran," Roy C. Treadway, Robert W. Gillespie, and Medhi Loghmani, *Studies in Family Planning*, Volume 7, Number 11, New York, New York, November 1976.

Clearinghouse on Development Communication
June 1977

THE *HAVE A HEART* FAMILY PLANNING CAMPAIGN Jamaica

TARGET AUDIENCE:	Jamaican men and women of reproductive age
OBJECTIVES:	To convince people of the impact family planning can have on the quality of life and to dislodge the belief that fertility is a reflection of virility or womanliness
MEDIA:	Radio and newspapers
DONOR/SPONSOR:	The National Family Planning Board
DURATION:	Instituted in 1975; ongoing
CONTACT:	Norma Soas, National Family Planning Board, 5 Sylvan Avenue, P.O. Box 287, Kingston 5, Jamaica

DESCRIPTION:

The *Have a Heart* Family Planning Campaign grew out of the Jamaican Government's realization that it would have to step up its family planning program if food shortages, overcrowding, underemployment, and unemployment were to be brought under control. The project complemented a series of government-sponsored efforts initiated in 1970 to increase Jamaicans' awareness of and receptivity to the use of contraceptives. While earlier campaigns bore themes such as "Plan Your Family, Better Your Life" and "Girls, You Don't Have to Get Pregnant" and stressed the benefits family planning affords the individual, the *Have a Heart* project emphasized consideration for others and concern about the future, as well as self-interest.

The public information segment of the *Have a Heart* campaign began in 1975 with radio and newspaper spots intended to familiarize Jamaicans with a broad range of contraceptives, to encourage pill and condom use in particular, and to create a general awareness of the role of family planning in personal and national development. A 34-part series of five-minute broadcasts, *Family Life Education*, covered family roles and structures, nutrition, the importance of privacy within the home, and a dozen other topics related to family size.

Later radio broadcasts dealt with sex and family planning more explicitly. Among other things, they told listeners how to choose a birth control method, how to explain reproduction and contraception to children, how a child develops in the womb, how to obtain counselling services, and how to avoid and detect venereal disease.

The present phase of the media effort that supports the *Have a Heart* campaign centers on full-page newspaper advertisements. The pictures and texts reinforce earlier messages, extend the discussion of family planning to topics such as child abuse and the physiology of human reproduction, and generate thousands of information requests.

RESULTS:

Within nine months of the inception of the campaign, a workable commercial marketing system for contraceptives had been extended to include many Jamaicans previously unreached by the contraceptive revolution. Not only were the brands endorsed and distributed during the *Have a Heart* project capturing a hefty percentage of the market, but overall sales of contraceptives were also running at a new high. Moreover, an Advice Bureau (to which members of the public can write, telephone, or come for personal counselling) was established at the National Family Planning Board as a direct result of the campaign.

The *Have a Heart* campaign's use of the mass media was so successful that National Family Planning Board activities scheduled through 1980 will follow a similar plan, carrying the approach even farther to include fuller use of community-based communication channels.

OF NOTE:

- Condoms were marketed under the name of "Panther" while oral contraceptives bore the brand name "Perle." Both were packaged handsomely and were designed to appeal to prevalent ideas of appropriate male and female roles.
- Typical commercial advertising was used in conjunction with radio spots and printed materials that incorporated discussion and feedback.
- To make disseminating information easier, the campaign staff identified four basic target groups: the "new generation," the "misinformed generation," "opinion leaders," and schoolchildren. Each group was approached on its own terms.
- Over 75 percent of those surveyed recently by the Institute of Mass Communications at the University of the West Indies claimed to accept family planning as positive in terms of Jamaica's development.

REFERENCES:

"Jamaica's Family Planning Communication Program Now Based on 'Have a Heart,'" IEC Newsletter, No. 25/26, East West Center, Honolulu, Hawaii, 1977.

"Use of Community Media Resources in a Communication Enterprise," Norma Soas, Caribbean Food and Nutrition Institute, mimeo J-113-76, Trinidad, September 1976.

Clearinghouse on Development Communication
June 1977

RADIO AND FAMILY PLANNING

Kiribati

TARGET AUDIENCE: Kiribatese adults of reproductive age

OBJECTIVE: To educate and inform the public about family planning techniques

MEDIA: Radio, interpersonal communication

DONORS/SPONSORS: Family Planning Association, Kiribati; Kiribati Broadcasting Authority

DURATION: Early 1970s - ongoing

CONTACT: Tomasi Tarau, Manager, Kiribati Broadcasting Authority, P. O. Box 78 , Bairiki, Tarawa, Kiribati, South Pacific

DESCRIPTION:

When family planning was initially introduced in the South Pacific Republic of Kiribati in 1969, the most traditional way to put across a message was used: talks conducted in the Maneaba (meeting house) with the village fathers. The impact of these talks was marginal. In a report of a tour of outer-island Maneabas, it was suggested that one good radio program could do more than a large number of family planning workers working through each village Maneaba in Kiribati.

Since radio is the only significant medium of mass communication in Kiribati, the decision to use radio for family planning education was most appropriate. In 1970, one out of every ten adults in Kiribati had a radio. Ten years later the ratio was much higher. Radio has always been the unifying force between the islands and is the main, often the only, contact with what is going on in Kiribati. In the early 1970s, however, broadcasting in Kiribati was in a dismal state with little information coming in, and few ideas as to what to do next.

At this time, the Family Planning Association stepped in with a mass of material to be recorded, which was welcomed, and which eventually monopolized the "features" output of the radio service. Tutors, nurses, and radio announcers were urged to participate. The backbone of the radio program was the half-hour series of weekly feature programs which put out, in as entertaining a manner as possible, the educational message. But it was perhaps the supporting radio spots that were inserted strategically between local items, often between the news and shipping forecast (prime listening time) when radios were rarely switched off, that caused the greatest interest, knowledge, and controversy about family planning. One message would be broadcast three times a day for a week, reinforcing the documentary program for that week.

The most successful family planning education technique proved to be the family planning song competition. Since music, one of the most highly developed art forms in Kiribati, is taken very seriously, it was believed the song competitions would make people learn more by themselves through composing their own songs. Instead of a family planning team going out to the villages to teach the people family planning techniques, people could compose their own songs, based on the information the team had given them, and thus learn on their own. The significance of this concept of self-learning lies in the fact that any sort of village project in Kiribati stands a better chance of success if it is seen to originate in the minds of the villagers rather than in a memorandum issued by some governmental department.

RESULTS:

Radio proved itself to be the most effective form of family planning communication. The family planning song competition was the most successful project in gaining communications involvement and getting family planning built into the various subcultures that make up the Kiribatese people. At the time when further "hard-sell" propaganda did more harm than good, family planning was kept constantly before the public through radio requests for the family planning music made by the public itself.

It was only on the initiative of the Family Planning Association, in their efforts to demonstrate the Calendar Method of birth control, that Radio Kiribati began to announce the date and day of the week in its broadcasting.

OF NOTE:

- A very popular family planning song remained near the top of the radio request numbers for nearly four years after the competition.
- The song competition offered cash prizes of \$15.00 for the winner, \$13.00 for the second and \$10.00 for the third prizes.
- Sometimes the weekly family planning message backfired. "Keep your wife looking healthy and beautiful - use family planning." Evaluation of this message revealed that Kiribatese men were not the least interested in keeping their wives' sex appeal.

REFERENCES:

"Radio and Family Planning in Kiribati," by Tomasi Tarau, Manager, Kiribati Broadcasting Authority. Combroad, September 1982.

International Dateline: News of World Population and Development - A Service for Mass Media. The Population Institute, New York, October 1982.

Clearinghouse on Development Communication
December 1983

(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

PREETHI MARKETING PROGRAM

Sri Lanka

TARGET AUDIENCE:	Sri Lanka adults of reproductive age (approximately 5,000,000 people)
OBJECTIVES:	To test the effectiveness of normal marketing practices to distribute condoms widely and thereby increase the number of Sri Lankan couples who practice family planning
MEDIA:	Newspapers, radio, cinema, slide-, print, and interpersonal communication
DONORS/SPONSORS:	International Planned Parenthood Federation (IPPF); Family Planning Association of Sri Lanka (FPASL); and Population Services International (PSI)
DURATION:	Began in 1973; ongoing
CONTACTS:	Family Planning Association of Sri Lanka, Buller's Lane, Colombo, 7, Sri Lanka; S.O.N. Hapugalle, 10/12 Vidyala Place, Colombo, 10, Sri Lanka; T.D.J. Louis, Population Services International, 16 Aloe Avenue, Colombo, 3, Sri Lanka

DESCRIPTION:

The *Preethi Marketing Program* was launched to help curb population growth in Sri Lanka by making contraceptives more readily available to the population at large. Population Services International (PSI) was commissioned in 1973 by the International Planned Parenthood Federation (IPPF) to initiate a contraceptive-marketing program in Sri Lanka with the cooperation of the Family Planning Association of Sri Lanka (FPASL). The goal of the program was to demonstrate that commercial marketing techniques could significantly increase the number of couples using reliable, modern contraceptives and that unit costs would be as low as or lower than those associated with clinic-based programs.

Prior to the establishment of the program, a feasibility study was undertaken by PSI to ascertain the most suitable country for demonstrating effectively the potential for social marketing of contraceptives. Five countries (Bangladesh, Sri Lanka, Indonesia, Malaysia, and Western Samoa) were considered as project sites. The main criteria for selecting Sri Lanka were the presence of (a) a good nationwide communications network, (b) a high level of literacy (defined as the ability to read and write a simple paragraph), (c) a good infrastructure of commercial outlets, (d) a hospitable Government policy, and (e) a high proportion of married couples in the cast economy.

The *Preethi Marketing Program* began in May 1973. During the first six months, a two-person PSI management team, assisted by a part-time Sri Lankan marketing consultant, designed the operational plan and commissioned market studies, distribution, advertising, and printing by local social agencies and private companies. IPPF's evaluation office collaborated with PSI management in the design of evaluation instruments, while PSI monitored, modified, and evaluated the program.

On October 1st, 1973, nationwide distribution and mass-media advertising commenced. The launch period was designated as two years — the time required for a new product in Sri Lanka to settle into the distribution pipeline, be accepted by retailers, receive any marketing modifications, and find its prime market segment. It was anticipated that the post-launch period would bring acceptance by additional segments of the fertile population. During the first launch month, 3,177 retailers purchased more than half a million "Preethi" brand condoms from traveling representatives of the distribution firm.

Three levels of education and advertising were used during the launch period: (1) mass-media advertising of Preethi's benefits was aimed at target participants, mainly through newspapers, radio, cinema slides, and retailers' display; (2) all Preethi retailers were educated and motivated using personal visits, samples, and booklets; and (3) by means of a direct mail campaign, 4,500 elite opinion leaders were informed of the program to secure their approval of the program, the method, and the brand name.

By March 31st, 1975 (18 months after the launch period began), nearly 5.9 million condoms had been distributed, including 5.6 million sold to more than 4,000 retailers, 114,000 sold by mail order, and 124,000 given away

as free samples. Mail-order sales began in January 1974; almost 2 percent of sales between October 1973 and the end of March 1975 were made by mail.

RESULTS:

The success of the *Preethi Marketing Program* recommends inclusion of the condom in a multi-method program. Use of the condom has improved the protection afforded by rhythm and provided a reliable alternative for those discontinuing use of the pill or IUD. The program to distribute Preethi has introduced new acceptors to the practice of family planning quickly and at low unit costs.

Preethi's future seems clear. In 1977, at a conference on "Village and Household Availability of Contraceptives" held in Tunis, S.D.N. Hapugalle (Preethi project director since June 1975) reported that Preethi sales, which averaged between 300,000 and 330,000 units per month in the first two years, reached a level of over 500,000 units per month at the close of the third year since launch. By 1976, the per capita consumption of Preethis amounted to 0.5, five times the pre-program level for 1973.

Acceptance of Preethi by 8 percent of Sri Lanka's fertile couples in the first program year (at a cost of only \$2.16 per acceptor) and an increase in the annual per capita use of this contraceptive by a factor of five in less than three years suggest that policy-makers in developing countries should consider wider use of social marketing for the advancement of family planning. Furthermore, the marketing model tends to produce lower unit costs over time. This may make the introduction of similar programs particularly appealing in those situations where program cost is an important factor.

OF NOTE:

- "Preethi" means happiness in both Sinhala and Tamil, the two predominant languages of Sri Lanka.
- In May 1975, PSI handed over management to IPPF's project director-designate, the former executive director of the FPASL. At that point the program was fully staffed by Sri Lankans.
- An essential aspect of the program was using an existing nationwide network of retailers to make Preethi available to the greatest number of fertile couples in the shortest possible time. Reckitt and Colman (Ceylon) Ltd., an established and successful marketer of various household products, was commissioned to package and distribute the imported product to its 4,000 prime retailers.
- In 1977, it was reported that although radio proved to have the best reach, this medium could not be used because product advertising of contraceptives by brand name is not permitted. The lack of radio support was felt because such support would have substantially increased sales. However, the project director has given radio talks during the peak listening hours to address such subjects as "Planning for Progress," "Population and National Development," "Communication and Development," and "Social Marketing."
- The project director holds monthly meetings with distributors and advertising-agency employees to review progress and make sure that the objectives of the project are being met.

REFERENCES:

"Measuring the Effectiveness of Contraceptive Marketing Programs: Preethi in Sri Lanka," John Davies and Terrence D.J. Louis, *Studies in Family Planning* — a publication of the Population Council, Volume 8, No.4, April 1977.

International Planned Parenthood Federation (IPPF) Report to Donors, 1974.

"Planned Parenthood and Community Based Distribution — Sri Lanka Model," presented at a conference on "Village and Household Availability of Contraceptives" under the auspices of The Battelle Population Study Centre and the Tunisian National Office of Family Planning and Population, Lt. Col. Dennis Hapugalle, March 1977.

Clearinghouse on Development Communication
April 1979

**NATIONAL CONTROL OF DIARRHEAL DISEASES PROJECT:
ORT COMMUNICATION CAMPAIGN
Egypt**

TARGET AUDIENCE:	Egyptian mothers with children under three, doctors, and health personnel
OBJECTIVES:	To educate the target audience about diarrheal disease, to promote the use of Oral Rehydration Therapy (ORT), and to lower the child mortality rate
MEDIA:	Television, radio, print, film, slide shows
DONORS/SPONSORS:	Government of the Arab Republic of Egypt; U.S. Agency for International Development
DURATION:	1982-1987
CONTACT:	Executive Director, National Control of Diarrheal Diseases Project, 20A Gamal El Din Abul Mahassen Street, Garden City, Cairo, Egypt

DESCRIPTION:

Over 60 percent of deaths of Egyptian children under the age of three are caused by diarrheal disease. The majority of these deaths are due to diarrheal dehydration and could be prevented by rehydration therapy. In late 1982, a five year project began, with a goal of reducing child mortality due to diarrhea by at least 25%. The overall program, the National Control of Diarrheal Disease Project (NCDDP), has six components: 1) production, packaging, and distribution of oral rehydration solution (ORS); 2) training in oral rehydration therapy (ORT) for physicians, pharmacists, nurses, and mothers; 3) clinical, social, and economic research related to ORT; 4) the use of television, radio, and other public media to promote the project nationally; 5) integration into the primary health care network; and 6) evaluation. A communication campaign strategy, using primarily television advertisements, was designed to educate the target audience about the dangers of diarrhea and the benefits of oral rehydration therapy.

Pre-campaign data was compiled to determine the most effective and appropriate channels for the ORT messages. Specifically, research and testing were conducted on the campaign logo, materials design, a name for the rehydration solution, and message design.

Four logo designs were selected from among ten submitted by local artists and advertising agencies. These were then tested in focus groups and in brief, public interviews to determine how people interpreted the logos. Project planners wanted to know what message the logos conveyed, if the logos contained anything objectionable, and which logos were most and least appealing. The most popular design was then tested again in other target groups and modified based on the test findings.

Naming the rehydration solution also required considerable field research. Mothers seemed to favor both emotive and practical names describing the purpose of the solution, while doctors and pharmacists insisted on a precise prescriptive name. The name chosen, The Solution for the Treatment of Diarrhea, is descriptive and scientific.

Because surveys found that over two-thirds of Egyptians have access to television (90% in urban areas), project planners assigned the medium a central role in the dissemination of educational messages about diarrheal disease. Producing precise and convincing TV advertisements (by June 1986 there had been four campaigns) has required diarrhea experts and

doctors to check the medical accuracy of the storyboards' ORT message and anthropologists to test the boards' effectiveness among the target audience. Revisions were made and filming of the commercials proceeded with a well-known personality delivering the message as a testimonial. The first few commercials featured a comedian known to children as "Uncle Fouad;" but subsequent ads have used a motherly actress in an advisor/counsellor role, which has been better received by mothers, doctors, and health personnel alike.

RESULTS:

Between early 1983 and 1984, knowledge of dehydration rose from 32 percent to 90 percent; knowledge of ORS rose from 1.5 percent to 96 percent. Ninety-eight percent of all Egyptian pharmacies now have ORS packets available, and it is now the leading sale item (in volume) of all diarrheal-related drugs in a survey of 300 pharmacists nationwide. Careful documentation shows that mass media made a major contribution to the increased use of ORS from one to nearly 70 percent. There has been approximately a 50 percent drop in diarrheal-related deaths nationwide. The success of NCDDP in Egypt indicates that mass media can help change behavior with proper campaign strategy; but mass media messages must be integrated with availability of the ORS, training of health workers, and constant monitoring and feedback.

OF NOTE:

- Several lessons have been learned from the campaign. 1) A social marketing program must first familiarize government officials with the meaning and importance of "social marketing," and social marketers need to understand the politics of government decision-making in order to be convincing. 2) Leading pediatricians' input to the project should be emphasized with regard to the technical aspects of the campaign message. 3) Extensive formative and summative evaluation of campaign material has contributed to this project's continuing effectiveness.
- A project newsletter publishes information for doctors about clinical care, training of mothers, social attitudes and practices, delivery systems, and nutrition. It also includes original research conducted by physicians in Egypt, much of which is promoted by the project. Training films, print materials, and slides have been produced for health professionals and mothers.
- While conducting target audience research, anthropologists were asked so many health questions by mothers that a series of 30-second TV spots called "Mothers Ask Doctors" was produced based on these questions.

REFERENCES:

Carolyn Cantlay, "Reaching Mothers, Saving Lives: The Communications Component of the Egyptian National Control of Diarrheal Diseases Project (NCDDP)," Boston, Massachusetts, John Snow, Inc., 1985.

Farag Elkamel, "Lessons Learned from the Egyptian Program," Presentation at the Workshop on Social Marketing and ORT, Rosslyn, Virginia, November 1-2, 1984.

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"National Control of Diarrheal Diseases Project; Fact Sheet," Boston, Massachusetts, John Snow, Inc., June 1985.

Clearinghouse on Development Communication
May 1986

HAPPY BABY LOTTERY

The Gambia

- TARGET AUDIENCE:** Rural Gambian mothers
- OBJECTIVE:** To teach the proper mixing and administration of Oral Rehydration Salts (ORS), as part of a campaign to reduce child mortality caused by dehydration from diarrheal disease
- MEDIA:** Radio, print materials, interpersonal communication
- DONORS/SPONSORS:** Ministry of Health, The Gambia; U.S. Agency for International Development
- DURATION:** 1982
- CONTACT:** Mark Rasmuson, Academy for Educational Development, 1255 23rd Street, N.W., Washington, D.C. 20037; Dr. Anthony Meyer, S&T/ED, Agency for International Development, Washington, D.C. 20523

DESCRIPTION:

Infant mortality due to diarrheal dehydration has declined significantly in several countries as a result of a mass media campaign to promote the use of a life-saving oral rehydration solution. A national campaign in The Gambia was developed by the Mass Media and Health Practices Project to educate rural mothers in the proper treatment of acute infant dehydration. As part of this campaign, The Gambia's Medical and Health Department instituted a contest -- the Happy Baby Lottery -- that provided a structure for an intensive period of education on oral rehydration. Graphic materials, radio messages, face-to-face instruction, and inexpensive prizes were used as incentives to encourage mothers to participate in this educational process. Two hundred thousand handbills or "ORS mixing pictures" were distributed to 20 health centers throughout the country, and further distributed to mothers and village volunteers trained to demonstrate the correct mixing and administration techniques for a home-mixed water-sugar-salt solution. Simultaneously, Radio Gambia, the national radio station, began a four-language publicity campaign to interpret the multi-colored mixing picture to explain the process of administering the solution, and to point out that the mixing picture was also the ticket to enter the lottery.

After a month of explanatory broadcasts, the names of 18 villages from around the country were drawn at random and announced on the radio. The villages were the sites of a mixing contest, judged by a local health worker. Each woman who presented a mixing picture could enter a preliminary drawing to be chosen to demonstrate her mixing knowledge. Those who demonstrated the mixing procedure correctly received a one-liter plastic cup as a prize; if she could also correctly answer three of five questions about administering the solution, she received a bar of soap and became eligible for the Grand Prize Drawing. The five villages that participated most actively in the mixing contests received community prizes of a 100-kg. bag of rice and a 50-kg. bag of sugar. The Gambian President's wife drew the names of the 15 Grand Prize winners during an hour-long radio program and announced their prizes of a radio-cassette player.

RESULTS:

Training mothers to correctly mix and administer the water-sugar-salt solution was the primary educational objective of the campaign. The evaluation results showed that mothers

made impressive learning gains and their children's health improved significantly. The evaluation, conducted by Stanford University's Institute for Communication Research, was conducted concurrently with the educational program: four resident field workers followed 800 rural mothers over the two years of the program in order to observe the effects of the campaign, the extent of the adoption of ORS and the improvements in the health and nutrition of their children. At the end of a year, 84 percent of the mothers had heard of the home-mixed treatment. The percentage of mothers who knew the correct mixing procedure rose from zero at the beginning of the campaign to over 70 percent within nine months. Behavioral changes followed a similar pattern. Of diarrhea cases treated at home, use of the water-sugar-salt solution increased from 21.7 to 94.1 percent. A total of 47 percent of rural mothers reported having treated their child's diarrhea with the solution.

OF NOTE:

- Working radios were available in almost 60 percent of the compounds; men own most of the radios and control the choice of station. This argued for the need for a strategy that would encourage men to make the radios available to their wives. A contest that only women could enter met this need.
- A standard measuring unit to assure the correct amounts of water, sugar, and salt was found in Julpearl, a local soft drink: three Julpearl bottles of water equaled one liter, which were mixed with eight bottle caps of sugar and one bottle cap of salt.
- The campaign used only two graphic print materials -- the mixing picture and a red flag printed with the Happy Baby logo that identified the homes of community members trained to train others how to mix the water-sugar-salt solution.
- The larger educational campaign in The Gambia, which lasted two years, also made extensive use of face-to-face communication: health workers and the 700 to 800 Red Flag Volunteers who were carefully trained to teach rural community members about oral rehydration.
- The Lottery was planned to coincide with both the end of a planting cycle (giving mothers more free time), and the period of rainy-season diarrhea (assuring interest in the messages).
- The project followed a similar educational strategy of integrating print, broadcast, and face-to-face channels in its second year to educate mothers about the proper diet for a child during and after diarrhea.

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"Happy Baby Lottery," Project Support Communications Newsletter, UNICEF, Vol. 7, Number 1, April 1983.

Diarrhoea Dialogue, London, Issue 14, August 1983.

"Report on the 1982 'Happy Baby Lottery,' Field Notes #7, Mass Media and Health Practices, Academy for Educational Development, Washington, D.C., 1983.

"Executive Summary of Findings from the First Year of Evaluation of the Mass Media and Health Practices Project in The Gambia," Dennis R. Foote, Leslie Snyder, Peter Spain, Institute for Communication Research, Stanford University, 1983.

"Teaching Mothers Oral Rehydration," Horizons, Anthony J. Meyer, Clifford Block, Donald C. E. Ferguson, Washington, D.C., April 1983.

Clearinghouse on Development Communication
June 1985

RADIO MAM: "LET'S GUARD OUR HEALTH"

Guatemala

- TARGET AUDIENCE:** 20,000 farmers living in the municipalities of Cabrican and Huitan (total area: 100 square kilometers)
- OBJECTIVE:** To improve the health of the target audience by educating them in the uses of medicinal plants growing in the region
- MEDIA:** Radio, interpersonal communication, slides, posters
- DONORS/SPONSORS:** ACUMAM (Mam Cultural Association), ALER (Latin American Association of Radio Education), MISEREDR (German Catholic organization), local financing
- DURATION:** 1975 - ongoing
- CONTACT:** Asociación Latinoamericana de Educación Radiofónica, Atahualpa 427, Casilla 4639-A, Quito, Ecuador

DESCRIPTION:

In western Guatemala, in the department of Quezaltenango, one of the greatest problems facing the campesinos (rural farmers) is a lack of medical supplies and facilities to combat various ailments, including skin disease, parasites, and malnutrition. For the campesinos living in Cabrican and Huitan, the nearest hospital is 45 kilometers away and accessible only by a dirt road which cannot be used during most of the six-month rainy season. Bus fare is too expensive for most of the villagers and the hospital itself is overcrowded and poorly staffed (one nurse and rarely a doctor). Given the deficiency in medical assistance and the campesinos' lack of resources with which to buy commercial medicines, Radio MAM developed a health project whose central objective was to place medicinal techniques and means within the reach of the target audience, using natural resources and encouraging the appropriate use of nutritious remedies.

The radio program, entitled "Cuidemos Nuestra Salud" (Let's Guard Our Health), provides information on the medicinal properties and uses of herbs, roots, and fruits that grow in the area, and encourages campesinos to cultivate these natural resources in the areas in which they live. In addition, the program features ways to prepare the plants to combat the different illnesses a campesino may encounter, ways to cultivate and preserve these plants so they can be used throughout the year, and ways to teach others in the community to do the same. The program script is first written by an editor in Spanish and then translated into the Mam language. Before any program is recorded for broadcast, it is reviewed to ensure the message responds to the interests, needs, and problems of the community for which it is intended.

Health information and instruction are given through radio programs developed and produced by the radio staff in collaboration with community participants. Both the staff and the campesinos involved in the program receive theoretical and functional training. This training, conducted in a workshop format, covers all aspects of program production. In addition, staff and community members are trained in promotional skills, which include encouraging men, women, and students to organize themselves for learning (group discussions, self-instruction groups, etc.). All this, it is hoped, will contribute to improving the state of health among the campesino population.

The community participants -- some of whom collaborate with the staff to develop the programs, others who do promotional work in the field -- are recruited primarily through the radio program and from visitors to the station. Other members of the community are encouraged to attend classes on cultivation, utilization, and preservation of medicinal herbs sponsored by the promotional department of Radio MAM and run by health workers. Community participation is not limited to these classes. In addition, campesinos take part in interviews, answer questions, and form part of the evaluation component of Radio MAM. The radio programs are a means of support and motivation for the work done by the promotional department in the field. The project also makes use of posters and slides.

RESULTS:

The evaluation shows that campesinos have learned how to use natural medicines. Those responsible for the program's implementation believe that much of its success is due in large part to the fact that the program is based on the needs and interests of its audience; that the program is broadcast in their language (Mam); and that it offers available techniques to get the most out of the natural resources.

Radio MAM plans to produce a small booklet describing medicinal plants in the areas and their healing properties.

OF NOTE:

- Radio MAM is part of ACUMAM, a cultural organization run by the campesinos themselves, whose principle objective is to solve community problems through the medium of popular education.
- The practice of using plants as a means to cure illness dates back to the Mayas, the pre-Colombian indigenous inhabitants of the area. While many of their practices are still known, some which had been almost forgotten have been brought back through Radio MAM's project.
- Given the local illiteracy rate of 80 percent, the radio program is both popular and highly effective as an educational tool.

REFERENCES:

"Radio MAM: La Experiencia 'Cuidemos Nuestra Salud,'" Serie Experiencias 1, Asociacion Latinoamericana de Educacion Radiofonica (ALER), February 1982.

Clearinghouse on Development Communication
December 1983

RADIO DOCTOR

Haiti

TARGET AUDIENCE:	Haitian adults of reproductive age (roughly 2,500,000 men and women)
OBJECTIVES:	To provide information and advice on family planning, nutrition, common illnesses, maternal and child health, and related topics
MEDIA:	Radio, cassettes, print, and visual aids
DONORS/SPONSORS:	Haiti's Ministry of Health, the Ministry of Education, <i>Radio Nationale</i> , and <i>Radio Lumière</i>
DURATION:	Begun in 1967; ongoing
CONTACTS:	Edith Holiant, <i>Centre d'Hygiène Familiale</i> , 10, Première Impasse Lavaude, B.P. 430, Port-au-Prince, Haiti; Dr. Ary Bordes, <i>Centre d'Hygiène Familiale</i> , 10, Première Impasse Lavaud, B.P. 430, Port-au-Prince, Haiti

DESCRIPTION:

The *Radio Docteur* program was conceived by Dr. Ary Bordes (the present director of the *Centre d'Hygiène Familiale* and Chief of the Division of Family Hygiene of the Ministry of Health) in 1967 when Hurricane Flora spelled a temporary end to all broadcasting in Haiti, save that of a single station, *Radio Lumière*. The disaster bred a new appreciation of the nationwide reach of the sole functional station, and Bordes vowed to make the most of that capacity after the deluge. Within a few months of the storm, *Radio Docteur* broadcasts commenced.

For pretesting, ten-minute monologues — some 20 in all — were developed on four topics: prenatal care, the new mother, infant health, and family planning. All messages were broadcast uninterrupted in the waiting rooms of clinics. Gradually, feedback from the audience prompted the message designers at the *Centre d'Hygiène Familiale* to change their tack. Taking into account the potential of radio and the lackluster nature of the monologue format, they broke the messages up into one-minute segments, switched over to the dialogue format, and expanded the range of topics addressed. In keeping with public sentiment, they also revamped family-planning messages so that the stress now falls on the health benefits of spacing births rather than on the more negative notion of cooling population pressures.

Twice a day, six days a week, Haitians can now tune in *Radio Docteur* on either *Radio Lumière* or *Radio Nationale* in Creole, the local language. They have made household familiars of Fanny and Ti Jo, the two characters who keep the dialogue on health going by assuming a variety of paired roles: husband and wife, patient and doctor, or patient and nurse. A catchy theme song draws the listening audience in, and the listening fare changes according to the day of the week. Family-planning messages are featured on Mondays and Wednesdays, advice on maternal and child health is broadcast on Tuesdays, and national and international health news can be expected on Thursdays. Fridays are given over to discussion of the symptoms of common ailments, and Saturdays to the prevention and treatment of these same ills.

Radio seemed a natural choice for getting out health information and doctors' recommendations in Haiti. While precise statistics on radio ownership are not to be had (estimates on the number of transistors in the country vary from 85,000 to 300,000), 900 of the nation's 1,500 rural schools have access to radios, and the sight of a Haitian with a transistor in hand is a commonplace.

RESULTS:

The national impact of *Radio Docteur* has never been evaluated. A survey of a village of 4,000 that had heard the broadcasts for eight years indicated that knowledge of the subjects covered in the programs had risen dramatically. However, no attempt was made in the conduct of this study to isolate the effects of health-education efforts other than *Radio Docteur* on this population. Spot checks and other impressionistic evidence suggests that people have committed the messages to memory, but the relationship of health knowledge to health practices awaits study.

Another kind of measure of *Radio Docteur's* impact is the success of its in-school spinoff, *Classe d'Hygiène*. Aimed at 30,000 fifth- and sixth-graders (most of them between the ages of ten and fifteen), *Classe d'Hygiène* is an educational contest. The program is run from November to March of each year, and is now in its ninth year. Participants listen to twelve lessons on health, each of which is broadcast thrice weekly in French (the language of classroom instruction in Haiti). Immediately after each broadcast, the students answer five questions in writing, receiving two points per correct answer. Prizes and certificates are awarded both to outstanding participants and to their schools on the basis of end-of-term scores. Participation in this program has grown every year since its inception, with the number of written responses from fifth and sixth graders rising from 444 in 1970 to 20,064 in 1975.

After 1975, the *Radio Docteur* program was institutionalized through the Education Department in order to reach both the teachers and the pupils of all Haiti's elementary schools.

OF NOTE:

- In conjunction with other educational activities, the *Centre d'Hygiène* produces print materials, films, slide-tape shows, and folk media performances. It also runs seminars and training courses for health workers.
- The sponsoring government agencies and the *Centre d'Hygiène Familiale* (a private organization) enjoy excellent relations. The Center develops, pretests, and finds effective ways to present the messages, which the government incorporates into its programs.
- Both *Radio Lumière* and *Radio Nationale* are non-profit operations, and the Ministry of Health does not have to pay for broadcast time.
- Another project of *Radio Lumière*, still in the pilot stage, involves the attempt to use two-way radio to promote integrated rural development. The object is to encourage farmers, housewives, and youth to voice their complaints and opinions and to record their words on cassette tapes for replay.
- The present network of stations includes 16 affiliates, enough to insure nationwide coverage.

REFERENCES:

"On the Air," Edith Hollant, *Salubritas*, vol. 2, number 2, 1978.

"Two-way Radio for Haiti," *ACTION: World Association for Christian Communication Newsletter*, Number 28, March 1978.

Information, Education and Communication (Manuel d'Introduction en Education Sanitaire), Edith Lataillade Hollant and Laurent Eustache, *Centre d'Hygiène Familiale*, 1978.

"'Radio Docteur': Health Education Radio Program of the *Centre d'Hygiène Familiale*," Edith Hollant, unpublished paper, February 1977.

MASS MEDIA AND HEALTH PRACTICES

Honduras

- TARGET AUDIENCE:** Rural mothers and grandmothers of children under the age of five, and primary health care workers
- OBJECTIVE:** To strengthen and promote health education through the systematic application of mass communication; to contribute significantly toward the prevention and treatment of acute infant diarrhea in isolated rural areas
- MEDIA:** Radio, print materials, interpersonal communication
- DONORS/SPONSORS:** Ministry of Health, Honduras; U.S. Agency for International Development (AID)
- DURATION:** 1980 - 1983
- CONTACT:** Dr. William A. Smith, Academy for Educational Development, 1414 22nd Street, N.W., Washington, D. C. 20037, USA

DESCRIPTION:

In Honduras, diarrheal dehydration accounts for 24 percent of all infant deaths and represents the single greatest cause of infant mortality. In 1977 alone, 1,030 infants died from diarrheal dehydration. The most commonly available treatment for diarrheal dehydration in Honduras is intravenous (IV) therapy, which is expensive, requires trained medical personnel and a relatively sterile environment, and is available only in fixed health facilities which serve a small portion of the country's rural population. Given the limited availability of medical assistance, Honduras' Ministry of Health, in collaboration with the U.S. Agency for International Development (AID), developed a public education campaign whose central objective was to deliver home treatment of infant diarrhea, including the proper preparation and administration of Oral Rehydration Therapy (ORT). Launched in January 1980, the Mass Media and Health Practices Project combined radio, specialized print materials, and health worker training. The main objectives of this mass media campaign were: 1) to substantially reduce the number of deaths from diarrheal dehydration among children below the age of five; 2) to extend rehydration therapy to isolated rural areas; 3) to reduce the per-patient cost of rehydration therapy; and 4) to introduce several diarrhea-related prevention behaviors to a significant number of rural people living in isolated areas.

The project operated in Health Region No. 1 of Honduras. This region, chosen after careful study, provided a representative population of approximately 400,000. About 900 health care workers received four to eight hours of ORT training. The training focused on performance: mixing and administering ORT salts and teaching village assistants to do likewise. The trainees performed the mixing behaviors repeatedly, using simple props like a cardboard clock and life-like dolls to practice each step of the process. The trainees then became trainers; they educated mothers in ORT and in a number of behaviors associated with breastfeeding, infant food preparation, and personal hygiene. Flags were provided to be flown over the homes of mothers who had received ORT training so that others would know where to go for advice and/or further instruction.

Print materials and radio were used to reinforce the instruction given by the health care workers. Since the literacy rate among tested households was high -- 87 percent had at least one member who could read -- and 71 percent of households owned functioning radio, print and radio proved to be highly effective channels through which the messages could be communicated. The

basic messages stressed throughout the campaign were 1) administer ORT salts correctly when your child has diarrhea; 2) continue feeding and breastfeeding during diarrheal episodes; and 3) seek help if the child gets worse. Radio materials were mainly 30-60 second spot announcements, many of them featuring Dr. Salustiano, the program spokesman for technical information. Jingles, slogans, and songs were also incorporated. The announcements covered child care during diarrhea and encouraged the administration of "Litrosol" -- the name of locally packaged ORT salts. Posters and flipcharts were used to illustrate mixing directions for the ORT solution and to carry supporting messages.

RESULTS:

An evaluation of the project's first year by Stanford University demonstrates that the campaign was successful in giving people health information and getting them to change specific behaviors related to their response to infant diarrhea. Data was collected on 750 families randomly selected from 20 communities. Within a year, 93 percent of the mothers knew that the radio campaign was promoting Litrosol; 71 percent could recite the radio jingle stressing the administration of liquid during diarrhea; 42 percent knew that Litrosol prevented dehydration; and 49 percent had used Litrosol. Of those who had used Litrosol, 94 percent knew the correct mixing volume and 96 percent knew to use the entire package. The importance of these high percentages lies in the fact that incorrect mixture of the ORT solution can worsen a child's condition and, in some cases, might lead to death.

Sixteen months into the campaign, 39 percent of all cases of diarrhea within the previous two weeks among the sample households were being treated with Litrosol.

Mortality of children under five years of age in the study communities showed a drop in the proportion of deaths attributed to diarrhea from 47.5 percent in 1981 to 25 percent 1982.

A similar project with the same objectives was successfully carried out in The Gambia in 1981-1983.

OF NOTE:

- A significant pre-planning investigation of the medical problem, the social context, and the instructional tools was conducted before the project was implemented.
- The tone of the campaign was serious and straightforward. It sought to promote a mother-craft concept which supports what mothers are already doing and adds several components to "being a good mother." ORT was presented as the latest achievement of modern science: a remedy for lost appetite, and an aid to recovery. ORT was not presented as a remedy for diarrhea.
- Dr. Salustiano, one of the radio's principal characters, became a nationally known figure.
- The pre-packaged salts for the oral rehydration mixture were produced in Honduras, using the World Health Organization (WHO) formula.

REFERENCES:

"Mass Media and Health Practices: Project Implementation," (and other project papers) by William A. Smith, Academy for Educational Development, Washington, D.C., June 1982.

"Teaching Mothers Oral Rehydration," by Anthony J. Meyer, Clifford H. Block, and Donald C. E. Ferguson, in Horizons, April 1983.

"Evaluating the Impact of Health Education Systems," by Dennis R. Foote. Paper for presentation at the National Council for International Health Conference, June 13-15, 1983, in Washington, D. C.

ZAA NA UWATUNZE Kenya

TARGET AUDIENCE:	Kenyans within the national radio-broadcast sphere
OBJECTIVES:	To mix entertainment and education in an effort to spread vital messages on health, particularly on that of mothers and infants
MEDIA:	Radio
DONORS/SPONSORS:	UNICEF, the United Nations Fund for Population Activities, the Voice of Kenya, and the Kenyan Ministry of Health
DURATION:	Begun in February of 1975; pilot phase concluded in mid-1976; ongoing under the auspices of the Government of Kenya since 1976
CONTACTS:	Abigail Krystall, Bureau of Educational Research, Kenyatta University College, Box 43844, Nairobi, Kenya; Dr. Albert Maleche, Bureau of Educational Research, Kenyatta University College; Mark Harris, UNICEF, Communications and Information Office for Eastern Africa, P.O. Box 44145, Nairobi, Kenya

DESCRIPTION:

In 1975 UNICEF, the United Nations Fund for Population Activities, and the Voice of Kenya agreed to co-produce entertaining health-education programs for open broadcast. The series that grew out of the collaboration, *Zaa Na Uwatunze* (Giving Birth and Caring for Your Children), features nationally-known entertainers in an episodic situation comedy. The upbeat presentations cover down-to-earth subjects — the nutritional value of eggs, the dangers of entrusting infants to the care of young siblings, and the need for inoculation, etc. — and give listeners a chance to identify with both the situations and the characters.

Like all “soap opera” regulars, the characters in *Zaa Na Uwatunze* are stereotypes, and their predictability is redeemed by their exaggerated flair. The role of Mzee Pembe is that of sop. He is hidebound, given to drink, and blissfully ignorant of many of the needs and problems of his 16 children. Mama Njeri, the protagonist, is Mzee Pembe’s opposite and his mate. Her children’s welfare claims her nearly complete attention, and she must “educate” her stubbornly conservative husband besides. Her dramatic task is to convince him episode-by-episode and change-by-change that it is in the family’s interest to embrace some new ways and to let some traditions lapse. She is aided in this domestic struggle by a series of third parties, all of them played by a single versatile actor.

Zaa Na Uwatunze (popularly known as the Kiroboto show) is broadcast in Swahili, Kenya’s official language, once a week. Broadcasts last only 15 minutes each, but they command prime-time programming slots (on Sunday afternoons, and occasionally on Saturday nights). No scripts are used to produce the programs, although health educators and a U.N. consultant work closely with the actors, and the budget is shoestring by almost any standard. An ingredient that compensates for this lack of high-priced production techniques is spontaneity. The radio shows are recorded in studios packed with fans, so the actors play to the audience and use instant feedback to strengthen their performances.

An experiment in open broadcasting (which, by definition, aims to hold a mass audience that has no particular commitment to the subject matter or to self-education), *Zaa Na Uwatunze* has been linked to nonformal and formal educational activities for adults. Its episodic structure, characters, and allusions to themes treated in previous broadcasts seem to provide listeners with some sense of continuity and progress. Moreover, the programs reiterate the themes being taken up by health educators and field-workers, some of whom act as consultants to the production staff.

RESULTS:

The impact of the *Zaa Na Uwatunze* broadcasts has been calculated primarily in terms of the size of the listening audience, listeners' recall of health information, and their familiarity with the characters. No attempt has been made to study the effects on health practices of the knowledge gains and attitude changes brought about by the program.

Evaluative information has been garnered from four sources: the studio audience, fan mail, a questionnaire administered at the end of *Zaa Na Uwatunze's* first broadcast year, and two panels of government officials involved in rural education and rural development. Interestingly, the judgments of the panels of experts clashed with the evidence culled from the other sources, some experts insisting that the programs take on a more serious tone and the audience claiming to like the blend of message and madness.

One finding of the 510-person survey conducted in December of 1975 may explain this difference of opinion: highly educated Kenyans appeared least responsive to the programs, ostensibly because the information embedded in the comedy is not "news" to them. Other findings of the survey include the fact that 92 percent of those responding to the questionnaire knew of the program, the discovery that listening time was as great among those for whom Swahili is a second language as for those for whom it is the native tongue, the fact that radio ownership correlates directly with listenership, and the revelation that the programs seem to hold roughly equal appeal to all age groups (25 years of age and under, 26 to 50 years, and over 50 years). Given the nature of this broadcast experiment, the single most important conclusion drawn from early evaluations may be that somewhat over a third of the listening audience claimed to listen to the program primarily because it is funny, while over half said they tuned in because they felt that they learned something from the humorous shows.

OF NOTE:

- The characters in *Zaa Na Uwatunze* don't stand on ceremony. In one episode, the beleaguered wife threatens to sell herself if her husband continues to sell the family's much-needed eggs to buy beer.
- Fan mail for Mzee, Mama, and the stock characters has been received from listeners in several East African countries besides Kenya.
- The radio scripts are based on a standby formula from advertising. The object is to contrive a situation in which the audience identifies with the "straight man" who espouses sound ideas and laughs at the fool who upholds convention for its own sake.
- The *Zaa Na Uwatunze* series has been replicated in both Tanzania and Zambia, apparently with success.
- Some *Zaa Na Uwatunze* broadcasts were taped for use in cassette-listening forums sponsored by the U.N. Food and Agriculture Organization in conjunction with the Programs for Better Family Living under way in Kenya. Cassette recordings of the series are also being used in in-school home economics classes and in training programs for field-workers.
- A short film on *Zaa Na Uwatunze's* production techniques may be made by UNICEF for promoting the use of entertaining radio broadcasts in support of development projects.

REFERENCES:

- "Health Messages Through Humor," Susan Hostetler, *ICIT Report*, No. 15, Clearinghouse on Development Communication, July 1976.
- "Popular UNICEF Radio Show in Kenya Gives Health Tips in Situation Comedy," Michael T. Kaufman, *New York Times*, November 16, 1975.
- "The Kenya Radio Series which Teaches as it Entertains, and How You Can Do It," Mark Harris, United Nations Children's Fund, Nairobi, April 1976.

Miscellaneous translations of *Zaa Na Uwatunze* radio scripts, unpublished and undated.

Clearinghouse on Development Communication
October 1978

MALARIA CONTROL THROUGH A MASS DRUG ADMINISTRATION CAMPAIGN

Nicaragua

- TARGET AUDIENCE:** Entire population of Nicaragua over one year of age
- OBJECTIVE:** To develop a campaign in support of mass anti-malarial drug administration
- MEDIA:** Interpersonal communication, radio, television, posters, print, local media
- DONORS/SPONSORS:** Government of Nicaragua, Pan American Health Organization, UNICEF, United Nations Development Program (UNDP), local organizations (block organizations, student groups, women's organization, and unions)
- DURATION:** August - November 1981
- CONTACT:** Richard M. Garfield, Columbia University, School of Public Health, 600 West 168th Street, New York, N.Y. 10032, USA

DESCRIPTION:

Following the 1979 insurrection and overthrow of the Somoza government and the 1980 national literacy campaign, participation by the "marginalized" or poorest sectors of the population was both a goal and a means of developing the post-revolutionary Nicaraguan health care system. One of the ways this is being done is through the Jornadas Populares de Salud, a series of popular health campaigns. The office of the Jornadas, the largest section of the Ministry of Health, organizes periodic campaigns which utilize individuals and community organizations to design and carry out public health education and activities based on preventative rather than curative medicine. Such campaigns include immunization programs, clean-up days, first aid and disaster preparation, mosquito breeding site reduction campaigns, and nutrition education. The key to the success of the Jornadas lies in their greatest resource: the thousands of brigadistas (volunteers), including teachers, farmers, laborers, and local organizations in which they participate.

In November of 1981, the Jornada structure was used to develop a mass drug administration campaign for malaria control. Rather than just provide temporary protection to the individuals taking the drugs, the goal of the campaign was to reduce the transmission of the disease rapidly in hopes that conventional methods would then be more effective in achieving long-term control. Specific aims included the reduction in malaria cases from 50,000 to 4,000 in 1982. Deaths from malaria, it was hoped, would be eliminated altogether. Related objectives of the campaign included: 1) To teach the communities (not just the brigadistas) about malaria and improve their preventive activities; 2) To further expand community participation in health tasks; 3) To improve inter-ministerial and inter-organizational coordination in the area of health; and 4) To improve the organization of the evolving Popular Health Councils.

In 1981 there were 40 health educators in Nicaragua. Using a multiplier system, they trained over 70,000 brigadistas for November. Using the slogan "Only the people can educate the people," health educators organized the first training workshops for potential leaders. The 40 professional health educators trained 120 malaria health educators. Each of these persons trained, in turn, 10 early volunteers to be multiplicadores, or multipliers. It was the multipliers who, in turn, trained the 73,000 brigadistas.

Several weeks before the drugs were administered, a census of the population was made to determine the number of drugs to be distributed. The brigadistas conducting the census used the opportunity to talk to community members and urge them to participate. Extensive use was made of the popular media. All three of the country's daily newspapers carried articles about malaria and the campaign in the days preceding the campaign. Short advertisements were broadcast on the two television stations and on radio shows throughout the country. Radio messages designed and promoted by regional offices of the Popular Health Campaigns were considered to be the most effective method to reach the dispersed and isolated rural population. Other methods used to publicize the campaign included door-to-door contacts, workplace meetings, parents' meetings at schools, posters, and street megaphone advertisements.

RESULTS:

The mass drug administration appears to have been largely successful in overcoming the disappointments which characterized pre-revolutionary health programs. The high level of participation evoked by this campaign, which required a more active response of the population than any pre-revolutionary activities, suggests that the apathy of the past has been overcome. More than 85% of the country's population was counted in the malaria census. A little over 80% of these took the drugs, comprising 70% of the country's total population.

Routine monthly data collection by the Ministry of Health shows that the incidence of malaria was considerably reduced for the four months following the campaign. The campaign may have prevented 9,200 new malaria cases, yielding a cost savings per case averted between \$54 and \$108.

OF NOTE:

- Women played a predominant role in the campaign. About 80% of the brigadistas and 75% of the multipliers were women.
- Community participation in the malaria campaign was not uniform throughout Nicaragua. For example, while the Department of Masaya as a whole treated 75% of the estimated population, coverage varied between 49% in urban areas to near 100% in the rural areas.
- Negative publicity of the campaign also occurred, especially from anti-Sandinista political groups. One group of rightist doctors published an article postulating dangers of the anti-malarial drugs, including blindness, spontaneous abortion, amnesia and sudden death. Several brigadistas, other malaria workers, and a Pan American Health Organization representative in Nicaragua had their lives threatened by counterrevolutionary bands for promoting the campaign.

REFERENCES:

"Malaria Control in Nicaragua - Health Promotion Through a Mass Drug Administration Campaign" by Richard M. Garfield and Sten H. Vermund. Unpublished paper. Columbia University, January 1983.

"Special Report - Developments in Health Care in Nicaragua" by David C. Halperin and Richard M. Garfield. New England Journal of Medicine, August 1982.

Correspondence with Richard M. Garfield.

Clearinghouse on Development Communication
April 1983

MARKETING IODIZED SALT

Pakistan

TARGET AUDIENCE: Population of Pakistan

OBJECTIVE: To promote the use of iodized salt as a preventive measure against goiter

MEDIA: Radio, interpersonal communication, print, audiovisual aids

DONORS/SPONSORS: Government of Pakistan, UNICEF

DURATION: 1981 -1982

CONTACT: David Mason, Chief, Communication and Information Service (CIS), UNICEF, 58 Khayaban-e-Iqbal, F-7/2, P. O. Box 1063, Islamabad, Pakistan

DESCRIPTION:

Begun in the late 1970s, the Pakistani government's efforts to promote the use of iodized salt as part of a health campaign to prevent further occurrence of goiter (an enlargement of the thyroid gland producing swelling in the neck), were producing few results. Since the prevalence of goiter ranges between 70 percent and 90 percent in some parts of the country, the government was determined to improve the campaign, and turned to the Communication and Information Service (CIS) of UNICEF in Islamabad for assistance. CIS first evaluated the ongoing campaign and then offered suggestions based on its findings. Preliminary investigations revealed that much of the project's failure was the result of poor communications. For example, in areas of almost total illiteracy, the campaign relied entirely on printed materials. In addition, much of the promotional material was misleading, unsuitable, and uninformative.

Re-designing the campaign, UNICEF set out to project a more positive image of the salt, design a package that would easily be recognized, sell the salt as food, not medicine, and to use radio as the main promotion channel. The new strategy was to combine education with entertainment. Since the Pakistanis are staunch Moslems, it was decided to use Koranic verses to carry out the messages, along with popular dramas and folk stories (the most popular form of entertainment)--using visual media to back an initial radio campaign.

The promotional materials included: two tri-lingual (Urdu, Pushto, and Chitrali) calendars, one carrying a Koranic inscription, the other the packet design; a cartoon booklet for children; a question-and-answer booklet for opinion leaders (religious leaders, school teachers, etc.); hanging mobiles for retail outlets, self-adhesive stickers in every packet, 16 of which make up a shortened version of the cartoon story; and posters repeating one of the calendar designs. The decision to include the religious texts in the advertisements had a positive effect. The Koranic verse lent the posters a sanctity and prestige which kept people from taking them down. (During the first campaign, CIS found that most of the posters had been removed). The campaign also won the support of the Imams (Moslem priests) with this gesture, and the Imams now actively spread the message to use Peshawari salt. They are effective public opinion leaders in every village and have a large following.

Four radio spots were produced in dramatic form. They were pretested, and the two most easily understood were put on the air. The spots, 30 and 15 seconds long, were recorded in the Pushto and Chitrali languages. The Pushto spots are broadcast during the two most popular programs, "Hujra" and the agricultural program for rural audiences, during peak listening hours. The Chitrali spots are on the air during the Chitrali program in the evening.

RESULTS:

The first phase of the field evaluation produced promising results. Seventy percent of the people had heard the radio messages. Eighty percent of those who had listened to the radio could recall at least three basic messages: 1) use Peshawari salt; 2) it is good for one's health; and 3) it prevents goiter. In addition, 60 percent of the radio listeners reported discussion after the program.

The print material sparked interest through the booklets for school children, through the posters and mobiles at the stores, and through the Koranic calendars. On the advice of their peers, people gave the iodized salt a trial. Sales rose rapidly during the first few months of the campaign.

OF NOTE:

- All the materials, including the print and the audiovisual aids and the radio messages were pretested by UNICEF before they were fully incorporated in the campaign.
- The name given to the salt, Peshawari, (after the provincial capital) is acceptable to the people of both the valleys of Swat and Chitral (where goiter is most prevalent), historic rivals.
- Some of the world's largest salt deposits are located in Punjab in Pakistan.
- UNICEF also provided assistance for Pakistan's first crushing and iodizing salt plants.

REFERENCES:

"Marketing a New Kind of Salt in Pakistan" by David Mason and Ramzan Azhar. UNICEF News, Issue 114, 1982.

PSC (Project Support Communications) Newsletter, Vol 6, No. 2, UNICEF New York, 1982.

Packet of print and audiovisual materials used in the project, including two tri-lingual calendars, question-and-answer booklet, cartoon booklet and stickers, mobiles and poster.

Clearinghouse on Development Communication
April 1983

HEALTH EDUCATION RADIO DRAMAS

Sri Lanka

TARGET AUDIENCE:	Sinhala- and Tamil-speaking adult population of Sri Lanka
OBJECTIVE:	To use a mass media entertainment format to convey health and family-planning information
MEDIA:	Radio and postcards
DONOR/SPONSORS:	Ministry of Health, Ministry of Information and Broadcasting, Government of Sri Lanka; United Nations Fund for Population Activities; United Nations Children's Fund
DURATION:	Begun 1973, ended 1977
CONTACTS:	Piyasoma Medis, Sri Lanka Foundation Institute, 100 Independence Square, P.O. Box 1203, Colombo 7, Sri Lanka; Marty Rajandran, Program Officer, UNICEF, 5, Queens Avenue, Colombo 7, Sri Lanka

DESCRIPTION:

The Government of Sri Lanka and UNFPA developed and implemented a \$6 million multifaceted family-planning project in 1973. Eleven interrelated programs, including secondary school education, medical education, health delivery, health education, worker education, and mass communication were funded to encourage family planning. Under the mass communication component, two radio drama series were developed. Radio was selected as the medium because 72 percent of the total population had access to radio. Drama was chosen as the method because it was second only to music in listening popularity.

In late 1973, UNICEF and the Sri Lanka Broadcasting Corporation (SLBC) negotiated an agreement whereby SLBC would produce and broadcast the two radio dramas, one in the official Sinhala language, spoken by 72 percent of the population, the other in Tamil, spoken by 20.5 percent of the population. In return, UNICEF would provide SLBC with \$13,000 worth of production equipment. UNICEF and the Ministry of Health would be responsible for the family-planning information that would be woven into the series' story lines.

The Sinhala story focused on a family with 14 children. The problems associated with a large family were compared to those of a neighboring family with only four children, with the story line emphasizing the benefits to the children in the small family. The Tamil story dealt with a family with four children and an unemployed father. After encountering a series of problems associated with the burden of supporting the household, the father becomes aware of the importance of family planning.

Programs in both series were broadcast once a week from July 1974 to July 1975, the official project period. A committee of representatives of the Ministry of Health, the Ministry of Information and Broadcasting, and UNICEF was then formed to develop a format for program expansion. The committee considered family planning an aspect of family health and therefore felt that the scripts should be broadened to include other health messages. Health questions would be asked at the end of each program to solicit postcard replies, a technique that was feasible because of Sri Lanka's high literacy rate of 78 percent. With this feedback, reaction to program messages could be evaluated. The two new series began in March 1976 and were broadcast once a week through December 1976.

The new Sinhala drama series, *Pahan Siluwa*, retained the original story line. The educational content was expanded to include child health, hygiene, and nutrition. *Kan Kanda Theivam*, the Tamil series, adopted a new story line because the original had reached a logical conclusion. The Tamil story centered on a doctor and his family living in a rural village near a tea estate. In this setting, health questions pertaining to poor estate families, who are primarily Tamil speaking, could be addressed. The story characters presented health information in clever and humorous scripts. Religious themes and lively music were integral parts of both series.

RESULTS:

To evaluate the effectiveness and appropriateness of the series, random samples were taken from those who had sent in postcard replies. This sample population was sent a questionnaire and a self-addressed stamped return envelope. Again, the self-administered questionnaire could be used because of Sri Lanka's high literacy rate. There were 30 multiple-choice questions, which examined the sample's demographics, media usage, and specific knowledge of health information. The questionnaire did not try to find out if the health information was being used. That is, the questionnaire was to find out if the respondents understood and could recall health messages but not if they had adopted good health practices. The assumption (viable or not) was that the recall of specific health messages indicated strong adoption.

Although the questionnaires were sent to a large sample (1,100 Sinhala and 300 Tamil), the sample was biased in that it was drawn from listeners who had previously sent in postcards. This meant that only the positively pre-disposed and literate listeners would participate in the evaluation. However, with limited time and money, the evaluators elected to concentrate their analysis on these known listeners. The rate of response to the questionnaires was excellent for both series. Eight hundred Sinhala questionnaires (73 percent) and 180 Tamil questionnaires (60 percent) were returned. The following is a summary of the findings: 1) the respondents were primarily female, unmarried, unemployed, and below 30 years of age, with some secondary education; 2) 88 percent listened to the radio between 5 p.m. and 11 p.m.; 3) the majority preferred entertainment programs, but a substantial minority (39 percent) indicated a preference for educational programs; 4) identification of air time and main characters demonstrated a strong allegiance to the series, but few respondents had heard all of the programs in the series; 5) the respondents said the health information was new and valuable to them; and 59 percent of the Sinhala series listeners could recall some health messages, while 100 percent of the Tamil series listeners could recall health messages.

OF NOTE:

- From 33 to 50 percent of mothers attending health clinics in randomly selected areas listened to the program and could mention some health messages conveyed.
- Ninety-five percent of the postcards sent in response to the health question at the end of each program were correct answers.
- *Pahan Siluwa*, the Sinhala series, continued broadcasting under private sponsorship excluding the health messages from the scripts.
- Approximately 26,000 postcards were received during the series' broadcast. As many as 1,000 were received in one day.

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Clearinghouse on Development Communication
April 1980

MAN IS HEALTH (MTU NI AFYA) Tanzania

TARGET AUDIENCE:	Approximately one million adult villagers
OBJECTIVE:	To provide villagers with basic information on disease, disease control, and the relationship between environment and health
MEDIA:	Radio, cassette recorders, printed materials, interpersonal communication, flipcharts, and posters
DONOR/SPONSOR:	The Government of Tanzania with support from the Swedish International Development Authority
DURATION:	Conceived in 1971; developed in 1972; carried out in 1973
CONTACTS:	C. Zikambona, Planning and Research Department, Institute of Adult Education, University of Dar es Salaam, Dar es Salaam, Tanzania; Budd L. Hall, International Council for Adult Education, The Ontario Institute for Studies in Education, 252 Bloor St. West, Toronto, Canada M5S 1V6

DESCRIPTION:

The *Man is Health* project took root in late 1971 as a large-scale campaign aimed primarily at educating villagers on the symptoms, prevalence, and origins of five potentially controllable widespread diseases. The secondary objective of the project's designers was to provide the newly literate with an opportunity to practice their language skills. Under the combined auspices of the Tanzanian Ministries of Health, Education, and Rural Development, the campaign represented an attempt at integrated development.

The project was backed and set in motion by Tanzania's sole political party (The Tanzanian African National Union (TANU), The Institute of Adult Education, a half dozen government agencies, and Radio Tanzania. Officials at all levels were versed in the project's importance and facets; industry was called upon to manufacture clothing stamped with the project's logo; and broadcasters and journalists were charged with keeping the public informed of all campaign-related activities and ideas.

Some 18 months of planning, organizing, and training culminated in May of 1973 with a surge of educational and community-development activities. Each week for ten weeks each study group of from 15 to 60 met informally with a trained discussion leader to hear radio broadcasts and to discuss simple supplementary texts provided by the government. From these discussions of health and sanitation sprang community work projects conceived and carried out by the study groups in their own villages.

RESULTS:

An estimated two million Tanzanian adults, twice the number officials had hoped to reach, participated in the *Man is Health* project. Moreover, the overall attendance rate of those who attended from the beginning was 63 percent, an unparalleled achievement for a campaign of such breadth. A third indicator of success is also tangentially statistical: so pervasive was the health campaign's impact that project evaluators had to reclassify some of their control groups as experimental groups.

The campaign had its critics. Some felt that it failed to integrate existing health services into its "curriculum." Some complained of tie-ups in the distribution of the texts and materials. Others felt that the training activities were too sketchy. Nevertheless, concrete evidence of the campaign's effects on the quality of village life is everywhere. In particular, hundreds of thousands of latrines were built by those who heard the radio programs, sales of mosquito netting jumped sharply in some areas, and coastal townspeople filled many of the swamp holes in which disease-carrying insects breed after heavy rains.

OF NOTE:

- Each study group left at least one "monument" to the *Man is Health* campaign. Typical projects involved digging wells or clearing living areas of insect-infested vegetation.
- Some study groups continued to meet months after the health campaign ended.
- Reliance upon cell leaders in several districts reinforced the ten-house cell system as a means of stimulating participation in development.
- The texts and the study guides were printed on newspaper presses. A million copies were distributed, many of which were shared.
- Some study groups reportedly diagnosed diseases that afflicted group members and sent the victims to nearby hospitals, where the diagnoses were confirmed and the patients treated.
- The network of study group leaders established in the health campaign was reactivated for the national nutrition campaign, *Food is Life*, that began in June of 1975.

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Clearinghouse on Development Communication
June 1977

THE MOBREAL ADULT LITERACY EXPERIMENT

Brazil

TARGET AUDIENCE:	All illiterate Brazilian adults (roughly 18 million people in 1970)
OBJECTIVES:	To provide Brazil's adolescent and adult illiterates with literacy training and post-literacy programs designed to help students increase their incomes, participate more fully in community development, and find or forge the means to improve their living conditions
MEDIA:	Radio, print, posters, mobile A-V units, videotape, tape recorders, television, and interpersonal communication
DONORS/SPONSORS:	Brazil's Ministry of Education and Culture with support from other governmental and private organizations
DURATION:	Created in 1967 to implement Brazil's National Plan of Literacy and Continuing Education of Adolescents and Adults; reorganized in 1970; ongoing
CONTACTS:	Mr. Arlindo Lopes Corrêa, Executive Secretary, MOBREAL, Caixa Postal 56.036, Rio de Janeiro, RJ, Brazil; Mr. Sérgio Marinho Barbosa, Executive Secretary, MOBREAL; Research and Technical Documentation Center, Research and Training Division, MOBREAL

DESCRIPTION:

The reorganization of Brazil's adult literacy program into the massive *MOBREAL* program was triggered by a statistic that emerged during the 1970 national census — some 18 million Brazilians over the age of 15, one-third of the total adult population, could not read or write. Established by the government as a financially and administratively independent organization in September of 1970, *MOBREAL* represents a comprehensive attempt at promoting the practical literacy skills needed to increase the student's income, self-respect, and community involvement. Specifically, it is aimed at reducing the illiteracy rate from the 1970 level of 33 percent to 10 percent by 1980 (the rate in 1977 was 14.2 percent). The manifestation of a strategy rather than of a doctrine, the nationwide program takes many forms and varies from municipality to municipality. A pyramidal administrative structure and the centralized mass production of teaching materials do, however, provide the program with the motivating force and economic advantages of a national development effort.

MOBREAL consists in part of ongoing projects and in part of short-term experiments in adolescent and adult education. Permanent projects include the Functional Literacy Program, the Integrated Education Program, the Self-Teaching Program, the Cultural Program, the Diversified Community Action Program, the "Sports for All" campaign, and the Technology of Scarcity Project. Experimental programs have addressed a variety of pedagogical and evaluative concerns: how to design stop-gap courses for newly literate people, how to make the most of radio in literacy efforts, how to measure the impact of literacy teachers' private inhibitions on the progress of their students, etc. Of special interest among such experiments are the Radio Project (which was begun in 1972 to offer over radio to tens of thousands of potential literacy teachers training in the rudiments of linguistics, classroom dynamics, student evaluation, and so-called "new" math) and the planned introduction of TV into post-literacy classes in late 1978.

The municipality is *MOBREAL*'s basic administrative unit, and all of Brazil's nearly 4,000 municipalities take part in the program. Each Municipal Committee executes the programs conceptualized at central, regional, and state levels; it also raises some funds, initiates and coordinates social activities related to the literacy classes, and engages the literacy teachers (all of whom work part-time), monitors and local agents charged with organizing community-development activities in conjunction with the literacy program and with enrolling students.

The literacy teachers come from the ranks of primary-school teachers, university students, and other members of the community. About half their number have received only four years of formal education, most are between the ages of 18 and 24, and the annual turnover rate is over 30 percent. These teachers rely on teaching kits that are put together as a noncommercial "seeding" enterprise by book publishers located in the capital. They also have access to the service of mobile libraries-AV vans. Typically, they hold classes for two hours a day, submit monthly attendance sheets, collect pay on the basis of student enrollment, conduct periodic student evaluations and self-evaluations, and participate in social and cultural events connected with the literacy program, community education, and development.

RESULTS:

The trial-and-error evaluations conducted during *MOBRAL's* early years have gradually given way to more systematic and reliable measuring procedures. Originally, only indirect evaluations — those made primarily on the basis of documents — and on-the-spot visits were conducted routinely. Now, the Subsystem of Overall Supervision (established in 1973) carries out two types of evaluation: (1) a vertical type in which one part of the system is judged by another that is better qualified and (2) self-evaluation, which is considered a component of staff development and training. Both types take place along lines laid down in the Overall Supervision Manual published in 1972, and both take place at all project levels.

To gauge the program's success, *MOBRAL's* staff has devised a formula for measuring productivity in light of everyday circumstances. To put into perspective the drop-out problem associated with virtually all adult literacy programs, *MOBRAL* evaluators express total productivity as the ratio between the number of students passed at the end of the five-month program cycle and the total number of "pupils under agreement" (potential participants). *MOBRAL's* short-term drop-out rate has not exceeded 15 percent since the first year of the program. The ultimate drop-out rate decreased remarkably between 1971 and 1976 (22 percent to 2 percent). In 1977 the ultimate drop-out rate rose to 24 percent because some administrative difficulties left municipal bases without support for the development of their activities. From 1971 to 1977, the completion rate oscillated between 63 percent and 40 percent (average: 49 percent). In terms of sheer numbers, 507,567 people participated in *MOBRAL's* Functional Literacy Program in 1970, and 3,893,338 took part in 1977. From 1970 to 1977, almost 30 million people participated in *MOBRAL's* Functional Literacy Program and over 11 million became literate (average productivity: 38 percent).

Among the qualitative effects of the program have been (1) the design and implementation of new programs (cultural activities, professional training, self-teaching, health education) aimed at responding to the participants' needs and aspirations expressed during and after the completion of the Functional Literacy Course; (2) the creation, testing, and implementation of new forms of human resources training in the field of Adult Education (for supervisors, monitors, teachers, etc.); (3) the implementation of a series of programs and projects using new educational technologies, mostly for training and teaching purposes; (4) the reinforcement of local and traditional Brazilian culture; (5) the promotion of practical techniques for enhancing daily life and work; (6) the awakening of interest among the Brazilian "intelligentsia" in Brazilian Portuguese and in mass literacy; (7) the motivation of adults to educate their children in recognition of the importance of education in the development and integration of the national society; and (8) the adoption of *MOBRAL's* organizational structure by other Ministries and national, regional, and local organizations.

OF NOTE:

- The keystones of *MOBRAL's* administration are decentralization, the delegation of authority, self-evaluation, and an emphasis on staff training.
- The integrated cooperation of national and regional agencies and of local institutions and people is hearteningly complete. A handful of examples among scores include the Armed Forces (which have provided storage space for teaching materials), industries that have given their employees paid leave to take *MOBRAL* courses, and a coalition (consisting of the Amazonas Commercial and Industrial Association, the Technological University for Labor, and the Intensive Program for Manpower Training) that built nine boats for *MOBRAL's* use in the Amazon region.
- By 1977, one of every six Brazilians over 15 had participated in the *MOBRAL* Program.
- To encourage people to retain their literacy skills, *MOBRAL* publishes a newsletter and other easy-to-read materials, operates mobile libraries, and organizes libraries and reading rooms.
- Incentives for participation and performance include prizes for teachers whose classes have low drop-out rates, awards for excellent newspaper coverage of *MOBRAL* activities, and small cash payments for individuals who get an illiterate person to enroll in the program.
- Class size is flexible, but commonly *MOBRAL* study groups consist of from 25 to 30 students each.

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Clearinghouse on Development Communication
October 1978

MOVIMENTO DE EDUCAÇÃO DE BASE Brazil

TARGET AUDIENCE:	Originally, illiterate peasants in Northeastern Brazil (potentially, about 24 million adults), later expanded to include peasants in other regions
OBJECTIVES:	To help educate, politicize, and motivate adults without access to schools and health facilities (particularly by means of providing literacy and numeracy training) and to encourage the formation of base communities
MEDIA:	Radio, print, and interpersonal communication
DONORS/SPONSORS:	National Bishops Conference of Brazil, Brazil's Ministry of Education and Culture, Catholic and other aid-giving organizations in Europe and North America, and Brazil's Ministry of Health (1962-64)
DURATION:	Begun in 1961 as a literacy program; re-oriented in 1965 and again in 1971; ongoing
CONTACTS:	Sr. Anne Marie Speyer, Movimento de Educação de Base, Rua São Clemente 385, Rio de Janeiro, Brazil

DESCRIPTION:

From its inception in 1961, *Movimento de Educação de Base* has been a sectarian effort to fulfill the basic rights of the disenfranchised by offering practical training in problem-solving. But little besides the project's reason for being has remained unchanged. The original focus on literacy training gradually shifted to an emphasis on demystifying underdevelopment, albeit through literacy programs. Originally modelled after ACPO's *Radio Sutatenza* in Colombia, *MEB* no longer depends heavily upon the use of radio. Then too, the size of the project, the *MEB* curriculum, and *MEB*'s relationship with the national government have all changed with the political weather, with the military coup of 1964 in particular.

MEB's approach and its problems differ from those of many attempts within Latin America to mobilize the mass media for development. Instead of simply promoting progressive practices in the name of development, the project workers devote themselves to helping peasants perceive the roots and the dimensions of underdevelopment. Only then, the Freirean logic goes, can people work out and adopt solutions they can live with. Another distinguishing feature of this project is its use of the mass media. In *MEB*, books and radio broadcasts are used to support, not to replace, personal interaction. The backbone of the program is the *camponês*' (peasant farmers') study group. At weekly meetings, radio broadcasts on agriculture, nutrition, labor practices, and other practical topics are discussed with the help of group animators who use role-playing and other action-oriented techniques to draw group members into discussions of painful real-life problems.

A decentralized organization, *MEB* operates at four levels. The highest is the national team in Rio, whose members report to the six bishops appointed to the national Directive Council by the Catholic Bishops Conference and to the representatives from the Ministry of Education who sit on the Council. Divided into an administrative sector and a technical-pedagogical sector, the national team organizes new *sistemas* in response to local initiatives, sets policy, selects and trains personnel for the local teams, and handles other administrative procedures. It leaves all program development, however, to the local teams. The basic regional administrative unit, the *Sistema Educativo*, usually covers a single Catholic diocese and contains many radio schools. The third level is the local team, which plans and carries out the area's basic education program. Typically, this trained team of teachers, social workers, and others calls the region's most developed center its homebase and travels from there into the outlands. Animators make up the fourth level of the educational system. They are nominated by members of their community, trained locally, and given the responsibility of sparking dialogue and activities in their communities.

RESULTS:

MEB has suffered grave setbacks, but the project has nevertheless affected the lives of hundreds of thousands of Brazilians. An evaluator charged with assessing the efficiency of the project's first decade of operations found that the more than 5,000 radio schools in the *MEB* network as of 1964 had helped some 400,000 peasants to learn to read. Yet, the same researcher estimated, no more than 100,000 *camponês* acquired literacy skills through *MEB* between 1964 and 1970, most likely because the government that came to power in 1964 placed little premium on grassroots participation in social change.

Since 1970, *MEB*'s attempts at self-evaluation have consisted primarily of measuring the demand for courses, not assessing behavior changes brought about by *MEB* courses and activities. As of 1976, plans for conducting evaluations before, during, and after courses had been made, but so far post-course evaluation has not been on a par with needs assessment and enrollment analysis. Only a crude picture of the project's impact can be pieced together from registration statistics (which show, for example, that the programs called "community activities with a religious orientation" enjoy far greater popularity than *MEB*'s agricultural or health programs). The total number of participants in *MEB* is difficult to gauge since some listeners fall into more than one category of student. In 1977, about 15,000 people registered for the regular academic courses, while special programs involved just under 162,000 radio-listeners and non-school educational programs had over 171,000 registrants.

OF NOTE:

- *MEB*'s "animation" activities have included organizing soccer clubs, agricultural work, and rural syndicates.
- Potential local animators were observed by *MEB* staff members in their hometowns. Only candidates who did not condescend to nor patronize their fellow townspeople were selected for training.
- In 1968, *MEB* received UNESCO's Reva Pahlavi Prize for its high-caliber work in behalf of and with *camponês*.
- Radio's use in this project has taken a back seat to that of print and discussion. Unlike the animators, the medium is not regarded or used as a primary agent of social change.
- Northeastern Brazil was selected as the original project site and remains the focus of project activities because it is Brazil's poorest region and because, according to a 1975 estimate, over half the people in the region cannot read or write. The Amazon region is also the scene of intensive *MEB* activity.

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Clearinghouse on Development Communication
October 1978

RADIO ECCA Canary Islands

TARGET AUDIENCE:	Spanish and Latin American adults (more than 100,000 students in its first ten years of operation)
OBJECTIVES:	To provide inexpensive and practical education to adults as a means of promoting personal and community development
MEDIA:	Radio, print, interpersonal communication
DONORS/SPONSORS:	Cadena de Ondas Populares (COPE) under the Diocese of the Catholic Church of Spain
DURATION:	Begun in 1965; ongoing
CONTACT:	P. Francisco Villén Lucena, S.J., Radio ECCA, Avda. Mesa y López, 38, Apartado 994, Las Palmas de Gran Canaria; Luis Espina Cepeda, S.J., Radio ECCA

DESCRIPTION:

Radio Emisora Cultural de Canarias (ECCA) was founded by Jesuits to meet the educational needs of the adult who has never had the opportunity or time to attend school or whose education has been cut short. One of 45 stations under the jurisdiction of the Catholic Church in Spain, *Radio ECCA* began broadcasting in 1965. From the beginning, its directors and staff have been dedicated to "tri-dimensional education" — a combination of radio broadcasts, printed materials, and activities conducted by specially trained "orienters" — that appeals simultaneously to the mind, the emotions, and the spirit and that helps the student draw upon and legitimate experience acquired outside the learning environment. This extremely idealistic goal is paralleled, however, by the more practical objective of giving the majority inexpensive access to *ECCA* courses. Consequently, *ECCA's* self-acknowledged challenge is to keep quality and quantity balanced.

The educational radio broadcasts (which total 93 hours of FM and AM programming each week and which are aired on weekdays only) and the printed lessons (which are printed in *Radio ECCA's* own production facilities) reinforce and enhance each other. All printed matter is designed to proceed systematically from the easy to the difficult, the known to the unknown, the particular to the universal (or vice versa), and concept to explanation (or vice versa). Texts and workbooks have tear-out pages that the student completes and turns in as homework, and students are encouraged to annotate and underscore pertinent points in the course materials.

The tasks of preparing and taping lessons, taking administrative responsibility for 455 learning centers, and both culling and interpreting feedback from post-course questionnaires falls to the program's 50 "studio" teachers, most of whom are former public-school teachers selected by *ECCA* for their professional excellence. These specialists also supervise more than 250 extension teachers who are charged with reviewing the material covered during the broadcasts, passing out and collecting homework, correcting students' papers, helping the students relate the course material to their daily lives, and collecting weekly fees from participants.

While students are treated with the respect that the *Radio ECCA* staff believes that adult learners deserve, the learning pace is slow since most students cannot afford to devote more than a small fraction of their time to study. During the first primary-level literacy classes, for example, the students learn how to use a pencil and how to execute the simple lines that form the letters of the alphabet. Gradually, they learn to make the letters and to combine consonants and vowels to create words. By the end of the first course, most students can decipher and write simple sentences. In all, *Radio ECCA* offers courses in business and other work-related subjects such as agriculture, religious and secular culture, literacy, and English. Each course lasts from one to three years, and students may earn certificates at two levels: primary studies and graduate studies.

RESULTS:

Radio ECCA uses attendance records to measure its impact. From the time of the first broadcast, it has kept tabs on the number of students it serves and made estimates of its unenrolled listening audience. It has also periodically refined its methods of record-keeping. Evaluation of student achievement and follow-up studies of the radio courses' impact on students' lives have, however, been more haphazard and impressionistic.

In the first year of broadcasting, *Radio ECCA* had 1,401 active participants. By the end of its tenth year, the cumulative total had reached 107,599 (excluding the unenrolled audience). During its 11th year, the station enrolled student number 118,117. In Gran Canaria and on Fuerteventura, the percentages of the total populations that listened to *Radio ECCA* reached 20.35 and 21.34, respectively, probably because the station staff devoted more work to these areas. The number of students active at any one time peaked in 1970 at 23,507. The slow decline since then to 20,263 students in 1975 (excluding 8,493 students from the Iberian peninsula) may be a statistical quirk that reflects changes in record-keeping. (At any rate, only those students who attend regularly and who pay the weekly fee are counted present, so the attendance figures are no doubt conservative.) Since students under 14 years of age were categorically dropped from the program in 1976 on the assumption that children ought to be attending existing traditional schools, a further reduction in course participants can be expected.

A secondary indicator of *Radio ECCA's* success is its financial status. While no student is charged more than 100 pesetas (U.S. \$1.25) and the average charge is less than 50 pesetas each week, tuition fees met 64.4 percent of the station's total expenses in 1975. At the same time, costs per student have remained far below those typical of other types of schooling, and the quality of education has not been sacrificed to keep costs down.

OF NOTE:

- The word "analfabeto" ("illiterate") is never used in *Radio ECCA* broadcasts.
- One *ECCA* student compared a person who cannot read or write to a sack of potatoes — easy to manipulate and ignorant of his or her rights.
- The majority of the students in *ECCA's* first-level courses are of at least middle age.
- Curricula developers try to infuse the lessons with suspense; their aim is to get students to feel that they know more than they realized but "less than they will tomorrow."
- A study conducted in 1973 of Spanish radio audiences showed that *Radio ECCA* is the most popular station in Las Palmas (where it captures 38 percent of the listening audience on weekdays and 61 percent on Sundays) and the third most popular in Santa Cruz de Tenerife (16 and 22 percent, respectively).
- *Radio ECCA* has won almost every award for excellence in broadcasting that Spain offers: *Premio Nacional de Radio* (1967), *Antena de Oro* (1968), *Premio Ondas* (1971), *Bravo Nacional a los Hombres que Unen* (1971), and the *Medalla de Plata de los Cincuenta Años de la Radio Española* (1974).
- *Radio ECCA* airs neither news nor commercials. The 108 hours of weekly broadcast time that is not devoted to classes is allotted to music and public service programming.
- Radio stations in five Latin American countries — Santo Domingo, Ecuador, Bolivia, Venezuela, and Costa Rica — have been modeled after *Radio ECCA*.

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Clearinghouse on Development Communication
January 1978

UNIVERSIDAD ESTATAL A DISTANCIA

Costa Rica

- TARGET AUDIENCE:** Adult population of Costa Rica
- OBJECTIVE:** To democratize higher education in Costa Rica by opening up higher educational opportunities to new populations
- MEDIA:** Print, interpersonal communication, radio, television, audio- and videocassette recorders, newspapers
- DONORS/SPONSORS:** Government of Costa Rica, The British Open University, UNESCO, Organization of American States, University of Delaware (USA)
- DURATION:** 1977 - ongoing
- CONTACTS:** Chester Zelaya Goodman, Rector, Universidad Estatal a Distancia, Apartado 2, Plaza G. Viquez, San José, Costa Rica; Greville Rumble, The Open University, Walton Hall, Milton Keynes MK7 6AA, United Kingdom.

DESCRIPTION:

In its 1975-1980 plan, Costa Rica's National Council of Rectors (CONARE) noted that the costs of study coupled with the loss of potential earnings involved in attending university was too great a sacrifice for many families. Costa Rica's State Distance University (UNED) was created in 1977, the work of a small group of educators and the then Minister of Education, Fernando Volio Jimenez. Their prime concern was to address the problems facing higher education in Costa Rica by founding a university that, through its use of distance teaching methods, would bring higher education to a larger number of adults who, for academic, economic, social, or geographic reasons could not enter a traditional university. UNED's goals, therefore, were to give students the opportunity to acquire a university education without leaving their home communities, and to educate persons in specific areas of national need.

The UNED operates under a new type of university system that may make higher education more directly applicable to the needs of developing countries. UNED is a distance education system comprising teaching, learning, and administrative subsystems. The basic teaching medium is the printed course book, usually one per course. "Cassette-books" (audio tapes with supporting printed materials) may substitute for the basic course text. Some television programs are produced to support the written texts, and limited use of radio support for courses began in 1980.

With UNED's Distance Learning System (DLS), students can learn at home. Students register for courses, either independently or within a degree program, receive printed study materials, directions for study, and instructions about auxiliary materials such as television programs, radio discussion programs, and cassette tapes. They are assigned to one of UNED's 22 local academic centers, where they can go at specific times to meet with a tutor. They are also given telephone numbers and times when they can phone for tutorial assistance. The students must turn in homework and pass two major examinations in order to pass each course.

UNED is responsible for the production of most of the media used. Texts are printed by the University's press (Editorial UNED). UNED uses the editing and studio facilities of two television companies to produce the television programs. Total output is 80 programs per year. UNED's television programs are transmitted on four channels with an output of four hours per week (eight programs). Videocassette playback machines have been installed in some of the academic centers. UNED has its own sound studio where radio programs are produced. By the end of 1980 it was broadcasting a total of five hours a week on Radio Nacional and Radio Universidad.

Employing the Distance Learning System has enabled UNED to achieve one of its principal goals: to "take education to the people" instead of making the people come to the university. In

order to be successful, however, more than an adequate delivery system is needed--there must be something to deliver. Considerable market research was conducted to determine the specific needs of Costa Rica. The result was the decision to establish 11 degree programs or carreras (since expanded to 13). Many of the carreras have direct applicability to the poor. These include health services administration, nursing, nutrition, child social services, development promotion, agricultural extension, farm administration, business administration, and educational sciences.

In addition to the carreras of the Formal Studies Program, UNED also has an Extension Studies Program which consists primarily of non-degree programs. The programs offered or planned include environmental studies, teaching of geography, secondary education, extension studies in health, family life, and agriculture, and development of scientific interests.

RESULTS:

UNED is highly regarded wherever it is known, and is being looked to for advice by other Central American countries that would like to develop an open university. One reason for the success of UNED is the feeling that this form of higher education has more impact on the developmental needs of a country than does traditional education.

Data collected from interviews showed that community leaders have a very high opinion of UNED students and the efforts UNED is putting forth to educate people who cannot attend conventional universities. They also felt positively about the effects higher education might have on the poor through the increased services that university-educated people would bring to the community, particularly the development sector.

In evaluating the success of UNED, statistical analysis was used to compare UNED to the conventional universities in Costa Rica. Success was measured on the basis of accessibility, and general statistics on students. Defined in terms of cost, location, and eligibility, UNED's accessibility far surpassed that of any conventional university. The statistics compiled on students throughout the country showed that UNED's desertion rate was dramatically low. Compared to dropout rates of 57.6 percent, 69 percent, and 52 percent at the three major universities, only 30.5 percent of UNED's students dropped out in the first semester of 1979. The university is also cost efficient when compared with traditional Costa Rican universities. A UNED degree costs between 42 percent and 69 percent less than the conventional university degree.

OF NOTE:

- A proposed secondary education program (under the Extension Studies Program) would take over present night school activities that are now meeting with poor success and apply distance learning methods to a high school equivalency degree. A needs survey showed over 500,000 potential students for this program.
- The members of Costa Rica's population demonstrating the greatest need for education were the poor. Consequently, UNED's program was designed to accommodate and meet their needs. This was achieved in part by lowering the entrance qualifications. Whereas all conventional universities in Costa Rica require an entrance examination, UNED's sole requirement was that applicants hold a high school diploma.

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THE RADIO ASSISTED COMMUNITY BASIC EDUCATION PROJECT (RADECO)
Dominican Republic

TARGET AUDIENCE: Children 7-14 years of age

OBJECTIVE: To educate children who are unable to attend conventional classes

MEDIA: Radio, worksheets

DONORS/SPONSORS: U.S. Agency for International Development, Dominican Republic Secretariat of Education (SEEBAC)

DURATION: 1981-1986

CONTACTS: James Hoxeng, S&T/ED, Agency for International Development, Washington, D.C. 20523; John Helwig, InterAmerica Research Associates, 1555 Wilson Blvd., Rosslyn, Virginia 22209

DESCRIPTION:

The Radio Assisted Community Basic Education Project (called RADECO which stands for the Spanish name of the project: Radio Educativo Comunitario) in the Dominican Republic, is one in a series of projects funded by the U.S. Agency for International Development which are designed to improve the educational systems of developing countries. RADECO, in particular, is designed to reach children who cannot attend conventional schools because there are none nearby, because the local school system is overcrowded, or because the children have to work during the day and cannot attend morning classes. The RADECO project was initiated in 1981 and the site selected was the very poor Southwest region of the Dominican Republic. The project offices, therefore, were established in Barahona, the Southwest's provincial capital. The project's purpose was to test the ability of radio to deliver a basic primary education in places where there were neither school buildings nor trained teachers. The Comité Revisor y Coordinador (Revising and Coordinating Committee) was established to interpret policy and recommend solutions to problems concerning personnel, logistics and technical support. The Committee is headed by the Under Secretary for Education and is comprised of SEEBAC directors of curriculum, primary education training, international projects and educational media, local USAID education representatives and the InterAmerica Chief-of-Party.

Monday through Friday, after they have finished their daily tasks, the children meet for an hour and a half in simple shelters, typically four poles supporting a thatched roof, which have been provided or built by the community parent's organization. The project provides the radio, blackboard, and clipboards for the children to write on. In most of the radio classes, the children sit on rocks or on the ground. A paraprofessional (called a radio-auxiliar) is chosen by the community. He or she has at least a fourth grade education and is in charge of the radio, blackboard, pencils and clipboards; receives and distributes worksheets to be used in the lessons, and keeps attendance records.

There are now three grade levels, each of which provides 170 one-hour radio lessons per year. A lesson includes approximately 24 minutes of reading, 24 minutes of mathematics, and 10 minutes of social and natural sciences, and recreational segments. In the remaining half hour after the radio lesson, the children work with the paraprofessional to reinforce the material in the radio broadcast. The educational content of the program is the result of carefully developed "master plans" for each subject. The master plans are then turned into scripts by a team of scriptwriters which are recorded in the studio for broadcast. Student worksheets are developed for the radio lessons and designed in collaboration with local artists.

An evaluation team regularly visits ten control radio classes to observe the effectiveness of the broadcasts. The feedback from these teams is used by the technical coordinators to modify weekly lessons by eliminating the material that the children have firmly grasped and reinforcing the material with which they have difficulties. Project supervisors also frequently visit the radio classes by jeep, motorcycle or on foot, to distribute worksheets, pencils, chalk, radio batteries, etc.; to provide support to the radio-auxiliares; and to solicit feedback from parents on the children's progress and the auxiliares' performance.

The special benefits of this program are the interaction and participation of the children, community involvement, the fact that the classes can meet virtually anywhere, and the fact that the radio can reach groups of rural children who would otherwise be educationally isolated.

RESULTS:

The initial broadcasts from Barahona reached 400 pupils in 20 radio classes; the project was then extended to 1200 pupils in 50 radio classes. In July 1984, the production activities were moved to the capital city of Santo Domingo in order to integrate the project with the mainstream development projects of SEEBAC. The lessons are now being broadcast nationwide and the third grade level was incorporated into the production cycle.

RADECO children and children attending conventional schools in the first grade were tested and the results were compared. The average proportion of correct answers given by RADECO students was 51 percent while students in the comparison group averaged 45 percent. In second grade testing, on the average 58 percent of the RADECO students answered correctly compared to 48 percent of the comparison group. The difference in mathematics scores was the greatest while both groups scored about the same in writing. The testing and evaluation has shown that in one radio school hour, children learn at least as much as children in conventional schools learn in a typical school day.

OF NOTE:

- In addition to producing radio lessons, the project has been helpful in training Dominican professionals in radio lesson curriculum design. They are now able to continue working beyond grades one to three to develop the content for grades four to six. These professionals will be able to produce new radio lessons and expand the radio school's reach to an even broader segment of rural children.
- Parents of RADECO children are particularly pleased with the program since the children are needed to work in the fields during normal schools hours, and because there are no dress codes or required purchases of learning materials.
- Available data indicate that the project is cost effective as well as academically sound; however, additional evaluation results are needed to substantiate these preliminary data.

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"RADECO, Interactive Radio Instruction in the Dominican Republic," videotape, InterAmerica, 1985.

Clearinghouse on Development Communication
June 1985

RADIO SANTA MARIA

Dominican Republic

TARGET AUDIENCE:	Rural and urban lower-status adults in the Dominican Republic
OBJECTIVE:	To deliver primary and intermediate education that is both better and cheaper than that provided by the traditional school system
MEDIA:	Radio, print, and interpersonal communication
DONOR/SPONSOR:	Largely self-sufficient with some support from the Government of the Dominican Republic and private contributions
DURATION:	Begun in 1970; continuing
CONTACT:	Father Antonio Cabezas, Director, Radio Santa Maria, La Vega, Dominican Republic; Dr. Robert A. White, Instituto de Investigaciones Socio-Economicas, 4a. Calle, 4y5 Ave. Altos de la Urbana. Apartado 786, Tegucigalpa, D.C. Honduras

DESCRIPTION:

Begun in 1964 under the auspices of the Catholic Church in the Dominican Republic, *Radio Santa Maria* (RSM) centered its initial educational efforts on a literacy program that helped to certify more than 25,000 adults over a period of six years. A needs assessment defined the focus it has taken since 1970 — programs leading to certificates at the primary and intermediate levels.

Modeled after ECCA (Emisora Cultural de Canarias), the radiophonic school started in Spain in 1965, *Radio Santa Maria* depends on three educational aids: workbooklet texts, radio broadcasts, and field teachers. RSM also attempts to integrate the principles of lifelong education — relating school learning to real-life needs — into the traditional school curricula. Thus, classes in mathematics, Spanish, and social studies are illustrated by weekly “central themes” that represent peasants’ life situations; themes used in the past include human exploitation and dependence.

While daytime and evening programming include music and nonformal education programs on agriculture, health, and family planning, the hours from 7:00 to 9:00 p.m. from Monday through Friday are reserved for graded lessons. During these hours, when five other commercial and religious radio stations extend the broadcast sphere, RSM’s reach is nationwide. Four grade levels are broadcast each evening, with half an hour allotted to each grade. Four seven-minute lessons are spread over an hour’s broadcast. The remaining interludes provide for active student involvement in study and the completion of worksheets. Most of the teaching is done by a male-female team; the teammates assume teacher-student roles, asking questions and pausing before answering so that the radio audience has time to come up with answers at home.

On Saturdays students throughout the country congregate, usually in groups of 20, in local centers for two-hour sessions with a field teacher. Here, completed worksheets are collected (to be corrected and handed back the following week), students’ questions are handled, and the central theme is discussed. In addition, each student buys the next week’s packet of six to eight worksheets at a cost of U.S. 25 cents (of which the field teacher receives 15 cents).

According to a 1975 survey, most of the 20,000 students enrolled in *Radio Santa Maria*’s courses each year are young unmarried adults — 18 year-olds whose educational potential is otherwise constrained by their rural settings. The field teachers, like their students, are young; but they are required to have completed several years of schooling in advance of the level they teach.

The methodology evolved by *Radio Santa Maria* on the principles of lifelong education breaks with that depending on the conventional remote-memory of learning. The RSM curricula stress education as a tool that helps the individuals meet and cope with their environment. This approach, emphasizing the social situation of the student, requires the teaching staff to assume the unconventional posture of equals to their students, investigating and discovering with them rather than imparting knowledge to them. The hope is that the student’s self-image and adjustment to his or her world will be enhanced by such a school experience.

RESULTS:

A 1975 study of proportionally stratified samples of adult students compared the standard-test scores of *Radio Santa Maria* students with those of adult students taught by conventional methods. Generally, the radiophonic students (who study curricula adapted to reflect rural life) score as well or better than their conventionally educated counterparts on standardized tests. The innovative curricula seem to have stimulated *RSM* students to greater degrees of community participation. Student test results correlated with the competency of field teachers, suggesting that *RSM* field teachers are necessary reinforcers of radio and print material. *RSM* students, adults able to learn at a more rapid rate, require less class time. Thus, a student may finish eight grades in four years.

Seemingly efficient central administration — one director and six curriculum developers organize 520 field teachers and 12,000 students per semester — and special arrangements for buildings, broadcasting, and the purchase of paper, have helped keep operating costs down. The *RSM* out-of-school system costs \$25 per student per calendar year, in contrast to \$39 per student in the conventional adult education system. While unit costs increase with student enrollment in traditional schools, the reverse is true for the radiophonic approach. If 40,000 students enrolled in *RSM* per year, the cost per student, some estimate, would drop below \$20. Student contributions — approximately \$7 per course — covers 60 percent of the yearly *RSM* budget. Government subsidies and personal donations meet nearly all the remaining expenses.

OF NOTE:

- Since the investment in each course is worth roughly four days' pay at the minimum wage rate, students who understand the scope of their field teachers' duties are quick to notify the central administration when field teachers fail either to correct worksheets or to send in weekly fees.
- To keep policy decisions in the hands of the actual coordinators of the program, financial dependence on international institutions was limited to the setting up of the physical structure. The ongoing software component is largely self-supporting.
- Weekly enrollment records determine the printing quotas for the next week, so printing overruns are avoided and costs are kept down.
- Once concentrated in the north-central Cibao region of the Dominican Republic, *Radio Santa Maria* is now accessible to all but a small southwestern corner of the country.

REFERENCES:

"An Alternative Pattern of Basic Education: Radio Santa Maria," Robert A. White, *Experiments and Innovations in Education*, No. 30, UNESCO — Paris, 1976.

Clearinghouse on Development Communication
October 1977

THE SHUAR RADIO SCHOOLS

Ecuador

TARGET AUDIENCE:	School-aged children of the Shuar Indians of eastern Ecuador (approximately 3,100 in 1978)
OBJECTIVE:	To provide elementary education where conventional methods have failed
MEDIA:	Radio, print, and interpersonal communication
DONORS/SPONSORS:	The Shuar Indian Federation and international donors
DURATION:	Begun in 1972; ongoing
CONTACTS:	Rafael Mashinkias, Education Director, Shuar Federation, Domingo Comin 17-38, Sucua, Ecuador; Ampam Karakras, Shuar Federation, Apartado 4122, Sucua, Ecuador

DESCRIPTION:

Since 1972, the *Shuar Radio Schools* have served Ecuador's 26,000 Shuar Indians, who live in a jungle area now being colonized by settlers from the Spanish-speaking majority culture. Like most other indigenous groups in the Americas, the Shuar are having problems adapting to the onslaught of Western civilization. Shuar Federation documents speak of the traumatic impact of missionaries and colonists. They refer to the degeneration of moral standards, to the disintegration of the family, and to anomie. Also mentioned is the trend toward the development of an anonymous Shuar sub-proletariat living in peripheral belts around colonized centers.

The approaches of the national formal education system have had to be modified to meet the educational needs of the Shuar youth. Because populations tend to be sparsely settled (the average Shuar Federation Center having only 15 to 25 families in its vicinity), the costs of providing certified teachers for all the centers seemed unjustifiable. Indeed, in 1971, before the advent of the radio schools, only 36 of the 103 Shuar Federation Centers had schools.

Even in areas served by formal schools, drop-out rates have been high: teachers who did not know the Shuar language or culture could not meet the Shuar's educational needs. For example, of 30 certified teachers who were not ethnic Shuar, only two declared an interest in continuing to work with the Shuar. Among teachers in the 28 schools where the teachers had been working for at least two years, the same attitude prevailed. Of 30 recent graduates from Macas Teacher Training College (in the Shuar region), none felt that learning the Shuar language is necessary to work effectively among the Shuar.

Shuar Federation documents also report that traditional schooling materials and methods have failed to provide learning opportunities relevant to the Shuars' needs. The national textbooks do not use the Shuar language. According to the Federation, the figures and examples cited in the texts used in Ecuador are completely foreign to the mentality and experience of the young Shuar. Scheduling in the schools is not even attuned to the customary meal times of the Shuar.

To build a system based upon the few certified ethnic Shuar teachers, the Federation decided to use radio. With these teachers (called tele-teachers) occupying key positions, other less highly trained Shuars (called tele-auxiliaries) could run individual radio schools. The criteria for creation of a radio school have been the existence of (a) suitable facilities, (b) at least 15 potential participants, (c) active development projects in the community, and (d) community interest.

In 1973, the first year of operation, 503 students were enrolled in 30 radio schools. By 1978, the number of students enrolled had reached 3,086 and the number of radio schools had reached 120. The Federation reports that the number of centers still not convinced of the importance of the radio schools has fallen to three or four at most. (The few centers that resist still suspect a religious or political motivation behind the educational effort.)

The XI General Assembly of the Shuar Federation unanimously approved extension of the curriculum through the second cycle. Most of the bi-lingual textbooks needed to teach reading and math in the first through fourth grades have been developed, and the XXII General Assembly ratified expansion to cover the entire primary curriculum. As of May of 1978, texts were being developed for 4th-grade math and 5th-grade reading.

Each tele-lesson begins with a 25-minute segment led by the tele-teacher in the radio studio. After a brief introduction, the material from the previous lesson is reviewed. The new material is then presented in a series of steps including those aimed at motivating the students and evaluating their progress. Next, the tele-auxiliary in the classroom leads exercises in which the new knowledge is repeated and reviewed.

The methods employed include directed group listening, use of printed materials, and continuous supervision from the central staff. Six professionals, who are also responsible for upgrading the effectiveness of the tele-auxiliaries, for motivating community action, and for assisting in formal evaluation of the instruction, make up the supervisory staff.

By stressing the Shuar language and culture, the classroom methods encourage the liberation of the positive energies of the students. Commitments to maintaining and developing the cultural identity of the Shuar and to overcoming complexes that result from being colonized are strong. Besides covering the official curriculum, the aim is to integrate — *not* to assimilate — the Shuar into the mainstream.

RESULTS:

For the first time education offered to Shuar youth has been systematized, consciously related to Shuar culture, and made the responsibility of Shuar teachers. The Federation estimates that the drop-out rate is now minimal, compared with a rate of 30 percent in the conventional schools that the radio schools replaced.

The numbers of students enrolled have grown steadily over the years that the radio schools have operated. The pass rates have been high, although they have declined somewhat with the expansion of the system:

Year	Students completing the academic year	Students promoted	Pass rate
1972-73	486	473	97.4%
1973-74	1,278	1,231	96.4%
1974-75	1,955	1,732	89.0%
1975-76	2,654	2,349	88.0%
1976-77	2,704	2,285	84.5%

OF NOTE:

- Annual courses for the tele-auxiliaries are planned in order to upgrade their effectiveness as teachers.
- The bi-lingual education law of neighboring Peru places Quechua on an equal footing with Spanish as a national language, a fact the Shuar Federation is weighing.
- One of the Shuar publications contains excerpts from *Bury My Heart At Wounded Knee* and comparisons of the Shuar's current situation with the historical predicament of the North American Indians.
- In 1978-79, a small number of centers will undertake an experimental program, entrance to which will not require a primary certificate. The focus will be on practical learning — on upgrading and marketing local crafts, for instance.
- The methods employed in the radio schools promote spoken and written fluency in both the Shuar's mother language and in Spanish: The Shuar language is *not* used as a mere bridge toward expression in the national language.
- While the administrators of *The Shuar Radio Schools* recognize the importance of teaching Shuar youth about the outside world, a lack of appropriate teaching materials inhibits efforts to do so.
- The project's supervisory and evaluation staff now consists of one chief administrator and eight auxiliary supervisors.

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"Consideraciones a Partir del Diagnostico," a paper presented at the Inter-American Seminar on Technology Transfer in Education, Organization of American States, Washington, D.C., 1978.

"A Proposito de la Ley de Colonizacion," *Chicam*, No. 19, Shuar Federation, Sucua, 1978.

Private conversation with Fr. Didier de Failly, CEPAS, Zaire, May 1978.

Clearinghouse on Development Communication
January 1979

BASIC VILLAGE EDUCATION Guatemala

TARGET AUDIENCE:	Indian and Ladino farmers in Guatemala
OBJECTIVE:	To change farming practices and increase production through the effective use of communication
MEDIA:	Interpersonal communication/ ^{radio} forums, graphic materials
DONORS/SPONSORS:	The Latin American Bureau of the U.S. Agency for International Development, and the Guatemalan Ministries of Education and Agriculture
DURATION:	Implemented in 1973; ongoing
CONTACT:	Prof. Mario R. Dardon, Project Director, Programa de Educación Basica Rural, 2a. Avenida 8 - 53, Zona 1, Guatemala City, Guatemala; Dr. Howard Lusk, Chief of Education, Science, and Technology, Latin America Bureau, U.S. AID, Rm. 2245 New State, Washington, D.C. 20523, U.S.A.

DESCRIPTION:

Basic Village Education (BVE) is a five-year experiment aimed at using communications media to acquaint Guatemalan farmers with modern agricultural practices. Its ancillary goal is to increase the effectiveness of extension workers so they can help solve individual and regional farming problems. The plan to test the cost-effectiveness of various mixes of communications media was implemented by the Academy for Educational Development under contract to the Agency for International Development (whose total contribution to the project will cumulatively total at least \$1,650,000 by the time the project is completed). The plan originally called for three and, later, for four distinct communications mixes, representing increasing degrees of contact with the rural families "in two vastly different cultural and geographical settings."

In 1973, the project was initiated among the Spanish-speaking Ladinos (Mestizos) in the southeastern part of Guatemala. Roughly 18 months later, the experiment was extended to include the western highlands, where it was directed toward the Quiché-speaking Indian population. In a survey conducted by the BVE staff in 1974, the illiteracy rate was pegged at 64 percent in the Yupiltepeque Valley of southeastern Guatemala and at 66 percent in rural communities near Momostenango in the highlands.

Radio was chosen as the main conduit for imparting new agricultural knowledge and stimulating behavioral change. Two radio stations broadcast eight hours a day, from 5 to 9 a.m. and from 4 to 8 p.m., Monday through Saturday. To attract and maintain a large listening audience, the BVE staff programs about 80 percent of the

broadcast time with music, entertainment, and other programs unrelated to agriculture. The remaining hours are devoted to the discussion of farming. The core agricultural program includes a 30-minute "agricultural magazine," radio novels, a question-and-answer interview with an agronomist, and 30 to 40 spots that carry agricultural messages.

The first of the four different communication treatments consists of messages delivered by radio alone. The second adds a village "monitor" — locally selected and trained for about a month — who weekly visits four or five villages that together contain approximately 200 families and who holds late afternoon forums at which recorded radio messages are played on a cassette recorder. The monitor uses flipcharts and posters to spark discussions, gives out take-home sheets, and in some cases, cultivates demonstration plots. A third treatment provides low-level technical assistance from agronomists, each of whom serves roughly 600 families. The BVE field agronomist works with monitors in the villages, conducts plot demonstrations, helps identify local crop-production problems, and advises farmers. He also serves as the monitors' supervisor and trainer and is an important feedback channel from the field. The fourth, added in 1975, employs monitors alone in areas not reached by the radio shows.

RESULTS:

Contrary to expectation, and probably because programming is so carefully tailored to local needs, *radio alone* seems to be having a significant impact on farmers' behavior. This particular experimental design, some say, has created an extended personal communications system rather than a traditional impersonal broadcasting sphere. Also, the monitors and agronomists appear to reinforce the radio messages effectively.

The radio forums tended to attract farmers already disposed to adopting more modern farming practices. But some farmers who did not attend the forums also changed their farming practices. Chief among the changes were the selection of heartier corn seed and the use of fertilizer at flowering and seeding time. Fungicide use also increased among many area farmers, but this change was less marked.

OF NOTE:

- In 1976, the usual effect of low rainfall on crop yields was exacerbated by a drought that occurred in the critical months of July through September.
- The experiment was disrupted by the earthquake in February of 1976. For a month project resources were used almost exclusively in relief activities.
- The introduction of silk-screening in 1976 produced superior graphics, eliminated tedious hand copying, and allowed artists more time to integrate feedback concepts into future illustrative materials.

REFERENCES:

"The Basic Village Education Project: Third Interim Report, Field Operations, June 1975 — 1976," Academy for Educational Development, Washington, D.C., 1976.

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Clearinghouse on Development Communication
June 1977

ACCION CULTURAL POPULAR HONDUREÑA Honduras

TARGET AUDIENCE:	Illiterate and semi-literate <i>campesinos</i> throughout Honduras
OBJECTIVES:	Initially, to help <i>campesinos</i> acquire literacy skills and information related to health and community development; later, to set up an agricultural education program and to help <i>campesinos</i> organize politically and socially
MEDIA:	Radio and print
DONORS/SPONSORS:	Social Christian Movement
DURATION:	Begun in 1960; ongoing
CONTACTS:	Prof. Vilma de Pacheco, Acción Cultural Popular Hondureña, Apartado C-24, Tegucigalpa, Honduras; Dr. Robert A. White, Instituto de Investigaciones Socio-Economicas, 4a. Calle, 4 y 5 Ave. Altos de la Urbana, Apartado 786, Tegucigalpa, D.C. Honduras

DESCRIPTION:

Acción Cultural Popular Hondureña (ACPH) is both the education arm of the Honduran *campesino*-based self-development movement called the Popular Promotion Movement (PPM) and a young relative of Colombia's ACPO radio schools. ACPH got its start in 1960 when a Honduran priest, P. Jose Molina, returned from a brief internship at ACPO and helped set up an experimental radio school in the environs of Tegucigalpa. Although now supervised by a lay board of directors, the school has relied heavily upon the grassroots parish networks and upon the motivating power of the pulpit in its efforts to spread literacy and information.

ACPH was essentially an ACPO transplant in its early years, and ACPH's system and textbooks were adapted from Colombian models. Like its prototype, ACPH called upon rural pastors to work up support for adult literacy classes. These local clerics selected one volunteer auxiliary teacher (or "monitor") from a *campesino* family in each community. In turn, these monitors were trained to recruit students, organize classes, help the regular classroom teachers supervise student work, and file monthly reports on the attendance and progress of the classes. Monitors also took charge of the texts, radios, and other classroom materials.

By 1964, when student enrollment had reached almost 15,000 and the schools had been operating long enough to make reflective evaluation of their success meaningful, the emphasis of ACPH programs was switched from promoting literacy and short-term community-development campaigns to forming local organizations of the poorest *campesinos* in order to help the "disinherited" to create political and economic leverage. Reading and writing remained part of the curricula, but to these academic courses were added programs aimed at developing attitudes and skills that would enable the *campesinos* to organize themselves and to act responsibly to further their own social and economic welfare. The watchwords of the consciousness-raising activities became 'participation' and 'democratic leadership.'

In the late 1960s and early 1970s, ACPH took another step in the direction of equating adult education with politicization. The radio schools adopted Paulo Freire's psychosocial approach to personal and community self-realization. To consciousness-raising, the communication of fundamental skills, and the identification of indigenous leaders was added a fourth mandate — the formation of regional and national *campesino* organizations able to deal with government agencies. Part of the impetus for the organizing activities has come from members of the Christian Social Movement — university students and young professionals with training in agronomy, education, or economics — who aligned themselves with the PPM by 1970.

A recent change in ACPH's focus of operations, the addition of a four-year primary-school program leading to a diploma recognized by the Honduran Ministry of Education, took place in 1972. In 1977, ACPH introduced an agricultural education program using paraprofessional agronomists and mass communication methods to make agricultural technology available to small highland farmers in remote communities.

RESULTS:

ACPH has been evaluated by both its own staff and by professional evaluators called in from outside. The finding of a study conducted in the mid-1960s by outside observers was that enrollment was encouragingly high but that several factors (among them the facts that nothing prevents literate students from taking the courses and exams, that no reliable tabs are kept on the number of students who repeat each year, and that "cooperation" between the test-takers and test-givers was rumored to have taken place) made the qualitative aspects of the literacy and numeracy segments hard to assess. Sparse population distribution, lack of leisure time in which to study, administrative pitfalls, and adverse weather conditions were also identified in that study as unquantifiable determinants of the program's impact.

A more rigorous evaluation, conducted in 1971 by an American and based upon an analysis of a stratified sample of 794 radio-school students, confirmed the continued existence of the socioeconomic impediments identified in the earlier study and raised the question of the value of literacy to *campesinos* with little to read and little time in which to read it. This study found that roughly 108,000 students enrolled in ACPH between 1961 and 1970, that about 18,000 of that number were examined and passed at least once, and that only two-thirds of those who took an exam actually achieved minimum functional literacy (defined as the ability to recognize a series of words, match words to pictures, write one's name, and to answer in writing one or two questions about a passage).

The picture of the consciousness-raising and organizing activities of ACPH and PPM that emerges from the second study is brighter than that of the literacy program. ACPH has established a development communication system that has made possible the construction of hundreds of rural schools and many neighborhood water systems. It has served as the basis for the organization of *campesino* women's groups, consumer cooperatives, 300 agricultural production groups, and many local *campesino* pressure groups involved in land recuperation.

OF NOTE:

- The literacy programs are broadcast six days a week for a single seven- or eight-month term each year. The advanced classes are broadcast in mid-afternoon and the beginners' lessons in late afternoon. Groups meet in homes, schoolrooms, or parish halls.
- In 1970, an estimated 30 percent of those *campesinos* taking the literacy courses had nothing in their homes to read. Unlike ACPO, ACPH has not published inexpensive booklets and newspapers for the *campesinos* to enjoy at home.
- ACPH is one of the few radio school systems in Latin America that has adapted the psychosocial method (originally designed for direct teaching) to radio teaching.
- ACPH uses a combination of *campesino* paraprofessionals, the radio, volunteer agricultural promoters, and a system of neighborhood demonstration plots to communicate agricultural technology at low cost to small farmers in remote mountain communities.
- The basic education and agricultural education programs of ACPH are part of an integrated rural development system of private agencies that includes consumer and marketing cooperatives, a national federation of *campesino* women, an agricultural lending institution, and *campesino* pressure-groups.
- ACPH is developing a radio-mediated program of primary school education that is closely integrated with agricultural education and organized in terms of flexible, brief units of one month to six weeks each.

REFERENCES:

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Clearinghouse on Development Communication
April 1978

SITE TEACHER TRAINING India

TARGET AUDIENCE:	48,000 primary-school science teachers in the six states covered by the ATS-6 satellite
OBJECTIVE:	To improve the effectiveness of science-teachers' skills by introducing the scientific method, upgrading the content of science programs, and encouraging classroom experimentation
MEDIA:	Satellite, television, print materials, radio, interpersonal communication
DONORS/SPONSORS:	The Centre for Educational Technology within India's National Council of Educational Research and Training
DURATION:	With satellite, during the experimental year — 1975-1976; ongoing (relying on other technologies)
CONTACTS:	Prof. Vijaya Mulay, Principal, Indian Centre for Educational Technology, Sri Aurobindo Marg, New Delhi 110016, India; Prof. Snehlata Shukla, Assistant Principal, CET

DESCRIPTION:

In August of 1975, India began a one-year experiment in mass education using a satellite to broadcast television in a variety of development programs. ATS-6 was lent to India by NASA, which positioned the satellite over the Pacific Ocean, where its "footprint" covered six of India's 22 states. 2,400 hard-to-reach rural villages participated in the Satellite Instructional Television Experiment (SITE). The objectives of the program were to test the country's ability to produce and utilize instructional television designed to cover agriculture, health, family planning, primary education, teacher training, and community development.

The Centre for Educational Technology (CET) prepared the materials for the SITE project: 13 films (each 22.5 minutes long), 12 radio programs (each 20 minutes long), instructions for teachers on how to perform 24 hours of experimental work in class, and printed materials for self study. CET also conducted training sessions for 3,000 tutors selected from among science graduates teaching in high schools or enrolled in teacher-training institutions. CET organized the practical work so that formal laboratories and expensive materials would not be needed to carry out the experimentation. It also devised a system to train roughly 24,000 teachers simultaneously. To this end, CET used 60 resource persons familiar with the philosophy and materials of the program to train the 3,000 tutors (to make sure that at least 2,400 would be available) who were, in turn, charged with training the teachers.

The TV programs, produced in four languages and broadcast via satellites to village sets with enlarged antennas and the radio broadcasts, formed the base of the training day. Accompanying print materials were produced, but their dissemination was sometimes made difficult by rain and poor roads. To reinforce content and methodology, teacher-monitors led discussions following the broadcasts. Subsequently, two and a half hours in each session were given over to experimentation — emphasized because rural teachers, unfamiliar with experimentation, are reluctant to risk losing face by publicly carrying out experiments that could fail. Those who conducted the program made a concerted effort to show that the scientific method — described by the program's director as observing the facts, framing a problem, systematizing knowledge, finding the possible causes and solutions to the problems, testing the possibilities, and coming to a solution — applies to a variety of settings.

A host of messages was stressed in the training program. Chief among them were the importance of experiments in science education and in imbuing students with the spirit of scientific inquiry, the fact that experiments can be performed without a laboratory, the appropriateness of the scientific method as a means of helping young children solve problems, the need to make use of the child's environment in scientific problem-solving, and the value of seeing the child's whole environment as a laboratory of sorts. Also emphasized were the importance of learning by doing, class participation, group work, and field trips. All these messages were carried by various media, according to which did the job best.

RESULTS:

CET conducted three studies of its teacher-training project. Two were associated with the two training programs offered in October 1975 and July 1976; one was made in a controlled situation. Each of the three studies pointed to positive gains in knowledge of content and pedagogy. These gains varied from 10 percent in the first attempt to 40 percent in the controlled experiment. Overall, the evaluations revealed that primary-school teachers received the training program positively.

Apart from gains in knowledge and understanding of methods, changes in classroom behavior were also observed. Apparently, teachers trained in this project were trying to conduct more experiments in their classes and were making an effort to involve students in the classroom. However, the students' initiative in asking questions has remained low.

Once knowledge of this project's success spread, educators in many areas where this training could not initially be offered began asking for materials and for other kinds of help in organizing similar programs in other states.

OF NOTE:

- A feedback component has been implemented to use teachers' observations made during the training sessions carried on throughout the year. This feedback takes the form of an active correspondence between graduates of the program and CET. Many rural teachers send descriptions of their problems to CET, asking its counsel. The Centre builds on this feedback to construct future program approaches.
- All of the electronic hardware used in the project, except the satellite itself, was produced in India, as was all of the broadcast programming.
- Although the ATS-6 moved away from India in July 1976, the teacher-training package is still being used. TV has been replaced by film, and most radio broadcasts by audio tapes.
- Official reports on the findings of the various components of SITE are now being released by the Indian agencies that participated. Evaluative papers on the teacher-training program are available through CET.
- The ATS-6, lent to India by NASA for the SITE experiment, generates higher powered signals than did earlier satellites. It thus requires relatively inexpensive earth stations equipped with easy-to-construct 10-foot wire mesh antennas. Consequently, the cost of earth stations to the Indian government was relatively low.
- The ATS-6 is the sixth and last in a series of American satellites designed to test, among other things, educational broadcasting to dispersed rural populations. In 1974, this satellite was used in a one-year experiment to provide health care in Alaska. It provided television communication between two remote clinics, a field hospital, and the referral hospital.

REFERENCES:

"SITE in India: High Learning Gains, Low Overhead," *Development Communication Report*, No. 19, July 1977.

Clearinghouse interview with Professors Vijaya Mulay and Snehlata Shukla, May 7, 1977.

Clearinghouse on Development Communication
January 1978

JAMAICAN MOVEMENT FOR THE ADVANCEMENT OF LITERACY

Jamaica

TARGET AUDIENCE:	Illiterate Jamaicans (between 400,000 and 500,000 people, or 20-25 percent of the population)
OBJECTIVE:	To eradicate illiteracy and improve the literacy skills of the adult population in Jamaica
MEDIA:	Interpersonal communication, radio, television, audiocassette, cassette recorders
DONOR/SPONSOR:	Jamaican Movement for the Advancement of Literacy (JAMAL)
DURATION:	1974 - ongoing
CONTACT:	Leila T. Thomas, Director, JAMAL, 47b South Camp Road, P. O. Box 60, Kingston 4, Jamaica, W.I.

DESCRIPTION:

The Jamaican Movement for the Advancement of Literacy (JAMAL) came into existence in 1974 after the former National Literacy Program which started in 1972 was restructured. Operating as a foundation, JAMAL's main objectives are to 1) eradicate illiteracy in Jamaica within the shortest possible period; 2) improve the literacy skills of the adult population; and 3) develop human resources and so enable each adult citizen to participate in the social, economic, and cultural development of the country.

Classroom instruction in the literacy program is supplemented with radio and television programs. In addition, audiocassettes and cassette players are distributed to classes. The integrated use of media is intended to reinforce what students are taught in classes, motivate teachers and students towards enrollment, assist in training teachers for the program, and publicize the work of the JAMAL Foundation. Ten radio programs and two television programs are broadcast for direct instruction to students. These are the "Teaching Box" programs and may be heard on AM/FM radio on Sundays through Thursdays and on television on Sundays and Thursdays. They are directly related to the curriculum and the basic reading materials used in classes. The cassettes afford an additional facility to teachers who re-use the recorded programs as the need arises in the classroom at the convenience of both students and teachers.

The various media also assist in training the large number of volunteers who supply the teaching force. Most of these people have had no training as teachers and those who are trained teachers have not been trained to teach adults. Radio and television broadcasts for teacher training are available in a series of 12 programs entitled "TOTAL" (Training of Teachers of Adult Learners). "Micro-teaching," which is widely used in teacher training, involves the use of video cassette recording equipment, and simulated teaching sessions. This system allows a trainee to demonstrate his or her teaching performance, have it recorded and played back for evaluation in which he/she participates. There are 20 fully equipped Permanent Teacher Training Centers to facilitate this type of training.

Part of the JAMAL Foundation, the Communications Department initiates and coordinates all JAMAL's contacts and programs with media stations, the press, and other publicizing agencies. The Department produces 16mm black-and-white motivational films for use on 14 mobile units which are fully equipped with film and recording equipment. Each unit is attached to a zone islandwide, and aims at intensifying public awareness regarding JAMAL's role in developing the nation's manpower resources.

RESULTS:

To date JAMAL has made 210,000 people literate, and in March 1983, approximately 32,629 students were enrolled in classes throughout the country. While not replacing face-to-face teaching, both the use of instructional programs on radio and television and the utilization of taped lessons on audiocassettes have proven to be valuable supplements to the work of volunteer teachers.

The success of JAMAL demonstrates that these various communications media can be used for training students and teachers, motivating for recruitment, obtaining varied forms of assistance, and bringing the program more forcibly to public attention.

OF NOTE:

- Although JAMAL produces its own radio and television programs, it must depend on the Jamaican Broadcasting Corporation for some technical aspects of program production and for transmission.
- The contents of JAMAL's broadcasts are subject to the regulations and standards set by the Jamaican Corporation License, regulated by the Broadcasting Authority, and approved by the transmitting station.

REFERENCES:

"JAMAL's Experience in the Use of Communications Media for Literacy," by Dr. Inez M. Grant, JAMAL Communications Specialist. Unpublished paper, 1980.

Clearinghouse on Development Communication
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CORRESPONDENCE COURSE UNIT

Kenya

TARGET AUDIENCE:	Kenyan primary-school teachers, government employees, staff members of private organizations, and other adults
OBJECTIVES:	To provide in-service courses to underqualified and unqualified primary-school teachers and to other adults in need of further training
MEDIA:	Print, radio, interpersonal communication
DONORS/SPONSORS:	Government of Kenya, University of Nairobi, and U.S. Agency for International Development (through April 1971)
DURATION:	Begun in 1967; ongoing
CONTACTS:	Peter Kinyanjui, Correspondence Course Unit, Institute of Adult Studies, University of Nairobi, P.O. Box 30688, Nairobi, Kenya; Simeon Ominde, Education Department, University of Nairobi

DESCRIPTION:

The *Correspondence Course Unit* was proposed in 1964 and set up in 1967, by which time it was obvious that Kenya's post-independence teacher-education program could not meet the nation's rising demand for qualified teachers. After a needs assessment was carried out by the Kenya Education Commission, highest priority in the CCU was accorded to courses designed to upgrade the skills of primary-school teachers, more than one-fourth of whom (10,500 of 38,000) lacked at least some necessary professional skills and credentials, and to qualify them for promotion. To these courses, called Kenya Junior Secondary Examination Preparatory Courses, was added in 1969 another series for teachers with no previous training whatsoever: the Unqualified Teachers (UQT) course comprises a preliminary phase of training in pedagogical methods and a secondary phase devoted to enhancing the teacher's knowledge of English, mathematics, and either history or geography. Those in the KJSE sections study privately on a part-time basis until they pass exams in five subjects. Those in the UQT courses attend three short live-in sessions during school holidays during the first year and study part-time on their own during the second; the untrained teachers need pass exams in only three subjects.

Each CCU course has four components. One consists of various printed materials — study guides, texts, maps, etc. — supplemented by simple instruments and science-experiment kits. Radio, which reiterates and supplements the content of the graphics, is the second part, while correspondence with high school and university instructors who grade the written work is the third. The last component is face-to-face teaching, most of which occurs at the residential sessions held during school breaks at the University of Nairobi's Institute of Adult Studies.

The relationship between the use of radio and that of print is determined by the CCU student. In general, the five hours of educational radio programs broadcast weekly are aimed at the slower students, who need a second chance to grasp the materials. The radio teacher obliges the slower learners by summarizing and highlighting the material, occasionally anticipating the students' questions and offering additional examples and explanations. Students satisfied with their command of the material (as measured by self-testing exercises included in the study guides) are free to skip the radio broadcasts. Nevertheless, radio does offer indispensable services to slow and quick learners alike: it provides correct models of pronunciation for language students, fosters rapport between teachers and students in a learning set-up that is otherwise relatively devoid of the human element, and provides entertainment in the form of music. The Voice of Kenya's CCU broadcasts have, in fact, attracted a substantial accidental (unenrolled) listening audience (estimated at between 300,000 and 800,000 adults) whose size has prompted the CCU programmers to address its needs.

In-service training programs for primary-school teachers will continue to grow, since as of 1974, primary education is free for all Kenyans. While the number of unqualified primary-school teachers had been reduced to 12,000 by late 1973, an estimated 25,000 such teachers had to be employed (along with all available qualified

teachers) by 1976. Although Kenya's 1974-78 Development Plan recommends adoption of a crash course (known as the "1+2 teacher-training program") to meet these new needs, it also specifies that "correspondence courses and radio programs must remain the main vehicles of out-of-school education."

RESULTS:

A fifth-year evaluation of the *CCU* project, carried out by a foreigner and based on the data gleaned from a questionnaire, showed that approximately 60 percent of the students' study-related problems were environmental. These obstacles to learning included lack of time or of a decent place in which to study, personal troubles, and family problems. In contrast, ten percent were constrained by pedagogic difficulties. The same evaluator pegged the drop-out rate at between 15 and 25 percent, as compared with 70 percent for students of foreign-based correspondence schools operating in Kenya.

Since 1968, the performances of all students sitting for the KJSE examinations have been compared. The comparison has shown that *CCU* participants consistently perform better than other exam-takers. In 1970, for example, when the average pass rate was 15 percent, 51 percent of the *CCU* students who took the exam passed it.

An evaluation of the UQT program was conducted in the early 1970s to find out if the program's graduates competed academically and professionally with graduates of teachers' colleges. By polling UQT graduates, researchers found that 99 percent felt that their performance in the classroom had improved as a result of the *CCU* training. This finding was corroborated by a poll of the UQT graduates' teaching supervisors, who reported that 95 percent of the teachers had made significant professional gains. In turn, the students of the newly trained teachers performed better than their peers on national exams.

Despite these positive findings, however, the program cannot be deemed an unqualified success until more thorough study is made of the teaching abilities of its graduates as measured in the classroom. Moreover, whether correspondence courses provide the best means of teaching teachers remains open to question.

OF NOTE:

- The *CCU* has its own facilities for printing, duplicating, binding, and mailing its course materials. Its production facilities include a recording studio and a small science laboratory.
- A survey conducted in 1968 showed that 90 percent of all *CCU* enrollees were teachers. The remaining tenth was made up of clerks, housewives, farmers, members of the police and the armed forces, and other workers.
- *CCU*'s enrollment is open year-round, and students are permitted to work more or less at their own paces.
- The typical *CCU* student is between 21 and 40 years old, is married, is responsible for more than four children or other dependents, and is not likely to own a radio or many books, buy a newspaper regularly, or have electricity in the home.
- In direct response to the success of *CCU*, several Kenyan organizations have decided to sponsor jointly a multi-media experiment using radio, film, and newspapers in conjunction with organized discussion groups in rural areas. If successful, the pilot project will become a long-term nationwide program.
- *CCU* offers some courses to blind students. These students can receive the broadcasts on cassettes and the printed materials in braille.
- None of the *CCU* graduates is known to have switched careers after finishing the course.
- The use of radio in this project represents, on the one hand, the continuation of the oral tradition in Africa and, on the other, an improvement over the often stale and alien fare offered by American and British correspondence schools in East Africa.

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"Correspondence Education in Africa," Kabuasa and Kaunda, eds., Routledge Kegan Paul, Ltd., 1973.

Clearinghouse on Development Communication
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(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

EDUCATION AND HUMAN RESOURCES

RADIO LANGUAGE ARTS PROJECT

Kenya

- TARGET AUDIENCE:** Kenyan children in the first three years of primary school
- OBJECTIVE:** To develop, implement, and test the effectiveness of an instructional system that uses radio intensively to teach English as a foreign language at the primary school level, Standards (grades) 1-3
- MEDIA:** Radio, print, interpersonal communication
- DONORS/SPONSORS:** Kenya's Ministry of Education; the United States Agency for International Development (AID)
- DURATION:** 1980 - 1985
- CONTACTS:** Maurice Imhoof, RLAP Project Director, Academy for Educational Development, 1414 22nd Street, NW, Washington, D.C. 20037, USA; Radio Language Arts Project, Kenya Institute of Education, P.O. Box 30231, Nairobi, Kenya

DESCRIPTION:

One of the challenges facing the Kenyan educational system is the existence of approximately 40 different languages in the country. The problem of supporting education in so many different languages has been approached by teaching in the pupils' mother tongue or language of their school district in the first three years of school, and adopting English (the official language of Kenya) as the medium of instruction thereafter. Kiswahili (the national language) is taught as a subject from Standard (grade) 4 on. All standardized examinations, including the primary level examination, are administered in English. A child's English-language abilities, therefore, are critical to his or her success in the formal education system.

Against this background, the Radio Language Arts Project (RLAP) was launched in 1980 to develop, implement, and test the effectiveness of an instructional system that uses radio intensively to teach English as a foreign language at the lower primary school level (grades one to three). A five-year research and development project, RLAP's first year was spent establishing the project (assembling the professional team, selecting schools, and completing the research design), analyzing the Kenyan English curriculum, and field-testing a variety of teaching methodologies for teaching English by radio. Regular broadcasts to 31 project schools in 7 districts began with Standard 1 in 1982. Standard 2 lessons were broadcast in 1983 to the same children, and Standard 3 is scheduled for the 1984 school year, based on the results of three years of broadcasting.

The most important question that the Radio Language Arts Project seeks to answer is whether a more intensive use of radio can be justified by improved pupil performance and reasonable, possibly reduced, costs. Compared to other schools' broadcasts in Kenya, RLAP's radio English lessons, known as the English in Action series, are longer (30 minutes instead of 15), are more frequent (new lessons daily instead of weekly), cover more of the school year (broadcasts 39 out of 40 weeks instead of 24 out of 40), and begin earlier (at the first year of primary school instead of the second). Over the first three years of primary school (the period covered by the RLAP), RLAP children will listen to 292.5 hours of radio English lessons, compared to the 12 hours of new radio instruction children in conventional classrooms receive in the same period.

RESULTS:

Initial results from the Standard 1 achievement test and from the questionnaire distributed to teachers and headmasters after the first year of broadcasting show substantial achievement gains and strong support from school personnel. The Standard 1 achievement test consisted of 40 questions measuring listening comprehension and 40 questions measuring reading comprehension, based on the Standard 1 English vocabulary and structures specified by the Kenyan syllabus. The test was administered at the end of 1981 to children in 21 project schools who had not heard the RLAP radio lessons. Exactly the same test was given to children in the same 21 project schools at the end of 1982. These children had used the radio method to learn English. Although reading was not introduced in the Standard 1 radio lessons until late in the year, average scores for the 40 reading comprehension items rose from 10.7 (26.7 percent) for children without the radio lessons to 13.1 (32.7 percent) for children with the radio lessons. This was a 22.5 percent improvement. The results for listening comprehension were even stronger. On the 40 listening items, average scores rose from 15.5 (38.8 percent) to 23.3 (58.2 percent), a 50 percent improvement.

The questionnaires completed by teachers and headmasters show that the radio English lessons have been very well received. Of those expressing an opinion, 89 percent rated the radio lessons as "good" or "excellent." No one rated them "poor." Ninety-nine percent of those responding felt that the radio pupils spoke better English after one year than pupils who had not had the radio lessons, and 90 percent felt that the radio pupils would be ready to use English as the sole medium of instruction after Standard 3. Of the two-thirds of the school staff who felt they knew how parents were reacting to the radio lessons, 98 percent said that the reaction was favorable. When asked whether the radio lessons should be continued at their schools, only one of the 85 teachers questioned said "no" (because of problems with radio reception and materials distribution). These first year results strongly suggest that intensive instructional radio will prove to be an effective tool for teaching English to rural primary school children.

OF NOTE:

- Formal teacher training has been limited to a one-day workshop at the beginning of the year. The workshop introduces teachers to the radio and the lessons, and explains how they can work effectively with this method. Many teachers have asked for longer training, but the costs would preclude national implementation of such a program. Instead, the radio lessons themselves are designed to give the teacher as much guidance and help as possible. The radio characters frequently give the teacher suggestions and request his or her help in various ways.
- The RLAP is not a curriculum development project in the strict sense. It does not determine what should be taught, since it follows the guidelines in the Kenyan Primary English Syllabus. Instead, it seeks to determine how the existing curriculum can best be taught with the help of radio.

REFERENCES:

"The Radio Language Arts Project: Teaching by Radio in Rural Kenyan Primary Schools," by Philip R. Christensen, Project Field Coordinator. Paper presented to the Northwestern University Program on Communication and Development Studies' "Communication, Mass Media and Development" Research Conference, October 13-15, 1983.

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Clearinghouse on Development Communication
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KEDI EDUCATIONAL RADIO AND TELEVISION BROADCASTING Korea

TARGET AUDIENCE:	Korean schoolchildren; youths and adults seeking post-middle-school education; teachers; and a general adult audience
OBJECTIVES:	To create a system of instructional design, using broadcasting media to enhance the effectiveness of classroom instruction and to increase educational access
MEDIA:	Print, television (closed-circuit), radio, and interpersonal communication
DONORS/SPONSORS:	The Government of Korea; Korean Educational Development Institute (KEDI); Korean Broadcasting Service (KBS); U.S. Agency for International Development; Export-Import Bank of U.S. Credits
DURATION:	Established in 1972; ongoing
CONTACTS:	Dr. Yung Dug Lee, President, KEDI, 20-1 Umyeon-Dong, Kangnam-Ku, Korea (Seoul C.P.O. Box 7019); Dr. Robert Morgan, Learning Systems Institute, Florida State University, Tallahassee, FL. 32306, U.S.A.

DESCRIPTION:

The Korean Educational Development Institute (KEDI) was established in 1972 amid growing concern over the need for comprehensive reform of an educational system that had been characterized by a critical regional imbalance of access to education, inadequate teacher training, and low student achievement levels. KEDI was created as an independent, government-funded educational research and development institute to serve the Ministry of Education in analyzing educational needs and designing and testing new teaching and learning materials and programs. KEDI's core assignment was the Elementary and Middle-School Development Project (E-M Project). The E-M Project plan included development of a curriculum that emphasized educational goals more relevant to national and individual needs, a different method of grouping students and administratively organizing schools, a different range and mix of instructional resources and delivery methods, and different patterns of instructional staffing. A major component of the five-year E-M Project (1972-77) was the development of a radio and television broadcasting system exclusively for educational purposes under the Ministry of Education. Materials developed by KEDI for the E-M Project included instructional materials (student workbooks, teachers guides, radio and television programs), evaluation instruments, teacher training materials, and implementation manuals.

In addition to the E-M Project, KEDI launched the Korean Air and Correspondence High School (ACHS) program in 1974 to provide secondary education via mass media to youths and adults at home and in ACHS classrooms. (See *Korean ACHS Project Profile*, April 1979.) Another special KEDI program was set up in 1973 to bring educational access to the residents of the 700 islands of the Sinahn District, a region with severe transportation and communication problems, limited social and cultural contacts, and poor educational opportunities. Daily FM radio broadcasts to 62 primary schools, 60 branch schools, and 13 middle schools consist of administrative, supervisory/training, instructional classroom, and nonformal community development educational programs.

KEDI's In-Service Teacher Education Project was established to provide a variety of educational programs to upgrade teachers' skills and competencies, utilizing instructional radio for 15 minutes each day for 22 weeks on such topics as current Korean educational problems, new educational systems and models, instructional objectives and procedures to develop materials, and the future of the country.

KEDI's broadcast system comprises a transmission site, completed in 1976, and a production and broadcast studio near Seoul, completed in 1975. KEDI's broadcast studio includes two large, highly developed, three-camera color television studios and two well-developed radio studios, one for voice recordings and one for dramatic production. A broadcast council was established to review and evaluate instructional television and radio (ITV and IR)

prior to airing, determine criteria for production and program quality, conduct research on ITV and IR effects on learning, and solicit feedback from users in the field.

During the period of construction of the transmission system, serious and unexpected technical problems arose that made television broadcasting impossible. KEDI's television transmission system was finally declared unworkable and was dismantled, and broadcasting to date has been limited to radio. This critical delay forced KEDI to rely upon a small, portable closed-circuit TV set-up for its ITV lessons; diverted manpower and time from other activities; and necessitated a major modification in the original testing, research, and implementation plan for the E-M Project. KEDI's reliance on radio and television for classroom instruction has been reduced significantly.

RESULTS:

Due to the delay caused by the failure of the transmission system, KEDI's staff and broadcast council have lost more than three years of broadcast experience as well as significant public credibility due to expectations for color television broadcasting. Despite this, KEDI has continued to collect and analyze data on the role of radio and television and has produced some 1,591 television programs in anticipation of the time when a transmission facility will be available.

Four "small-scale tryouts" were conducted as part of the E-M Project from May 1973 through July 1976, involving pupils from the second, third, and fifth grades in elementary schools receiving ITV and IR lessons in a variety of subjects. Although there are some problems with definitive interpretations of the results of these tryouts, they do show generally higher student achievement levels where KEDI instructional materials were used. From September 1975 through June 1978, four larger "comprehensive demonstrations" were conducted in grades three through six using ITV lessons via a closed-circuit TV system in two of the demonstrations and IR in three of them. Due to design methodology and lack of current information on results, the effects of ITV and IR alone are not known; however, available results on all of the major variables show significantly higher achievement levels for demonstration students. The effectiveness of KEDI print and non-print instructional materials was later tested in a "small-scale tryout" in a middle-school. Higher achievement scores were obtained by students in KEDI schools than in schools without KEDI materials, and, within the KEDI schools, higher achievement scores were obtained by students taught by ITV and IR.

While academic achievements of ACHS students generally fall below those of regular high school students, this has been attributed to differences in students' academic preparation. Problems in the project include programming that does not adequately hold students' attention and inability of students to keep the attendance schedule.

OF NOTE:

- Of total costs related to the E-M Project, 82.2 percent have resulted from efforts to create, program, and transmit radio and television for instructional purposes.
- Plans are now underway to construct a ground-based TV transmission system and FM radio networks that will reach into every major city in Korea, covering 80 percent of the total population.
- Construction of the new FM network of 43 stations is estimated to cost approximately \$5.3 million, and the cost of the planned two new radio studios is set at approximately \$0.5 million.

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Clearinghouse on Development Communication
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KOREAN AIR AND CORRESPONDENCE HIGH SCHOOL

Korea

TARGET AUDIENCE:	Youths and adults seeking post-middle-school education
OBJECTIVES:	To provide secondary education via the mass media to those unable to attend high school after finishing middle school
MEDIA:	Radio, print, and interpersonal communication
DONORS/SPONSORS:	The Government of Korea, Korean Education Development Institute (KEDI); Korean Broadcasting Service (KBS); the World Bank
DURATION:	Begun in 1974; ongoing
CONTACTS:	Shigenari Futagami, Media Specialist, Education Division, International Bank for Reconstruction and Development, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A.; Dr. Kuk Bom Shin, Director, Education Broadcasting Department, Korean Education Development Institute (KEDI), 20-1 Umyeon-Dong, Kangnam-Ku, Korea (Seoul C.P.O. Box 7019)

DESCRIPTION:

The *Korean Air and Correspondence High School (ACHS)* program was launched to provide high school education for youths and adults unable to continue their education because of economic and other reasons after finishing middle school. An offshoot of a similar program that operated at the junior college level, the *ACHS* program came into existence in March of 1974. The *ACHS* program, sponsored by the Korean government and the Korean Education Institute (KEDI), used the same principles and the same media as the junior college program.

The Ministry of Education takes responsibility for making policy, designing the curriculum, approving the establishment of participating schools, approving textbooks, and providing general supervision. The regional boards of education select the participating local schools, assign students to these schools, and offer local supervision. KEDI develops the textbooks used, produces and broadcasts the radio programs, selects course developers, designs books and evaluation materials, and compiles relevant statistics. The administrative functions of the *Air and Correspondence High Schools* include classroom teaching, student counselling and guidance, maintenance of student records, correction and evaluation, and management.

ACHS's curriculum and philosophy are basically the same as those of a regular high school (RHS), though some adjustments have been made. To obtain the *ACHS* Diploma, the student must complete 204 units of study in the three grades of the course. Each unit represents 50 minutes of instruction each week per semester. The units cover 14 subjects, including Korean, social science, mathematics, natural science, physical education, military training, English, German, music, and a vocational option. In addition to completing 204 units of study, the student is expected to put in some 1,224 hours of study a year, divided between self-study (862), instruction at a center (182), and instruction by radio (180). The mode of instruction in the *ACHS* is basically self-study, but considerable supplementary support is offered to the student. Total instruction consists of self-study, supplementary textbooks, programmed assignments, radio broadcasts tailored to the course, attendance at educational centers every other Sunday, correspondence by mail, and monitoring and testing.

The students receive radio lessons of 30 minutes (two 15-minute programs) a day and classroom lessons every other Sunday at the respective schools. Teachers and faculties of regular high schools are recruited and utilized for this program. Annually, 1,065 radio programs for each of the three grades of the *ACHS* are produced by the *KEDI* Broadcasting Department and delivered through KBS and other commercial broadcasting networks.

Plans for *KEDI* include those for constructing ground TV and FM radio networks using some common transmission and linking facilities. Construction of the new FM network (consisting of 43 FM stations [1-5 kw] costing approximately \$5.3 million) is scheduled to begin by 1980. Also, two new radio studios costing approximately \$0.5 million will be built. When the new radio network is completed, *ACHS* should be able to make more frequent use of radio lessons, which will be fully interwoven with *ACHS's* other instructional methods.

RESULTS:

Although much of the success of the *ACHS* project reflects the high motivation of the student body and the cooperation of government officials and the KEDI, it should be noted that a set of inherent comparative advantages facilitated project implementation and progress. First, the goals and objectives of such a project can be clearly defined with respect to target groups. Second, since the project depends heavily on the intensive use of existing human and physical resources, its costs can be kept manageable. Heavy investments in physical facilities or a great number of new teachers are not required. Existing classes of any school can be used, existing radio or television facilities can be rented, and trained high school teachers can be contracted. Third, the project's mode of financing is ideal: to a large extent, the project can be financed by user fees. In addition, other advantages derive from the flexible multi-media methods of instruction. Each educational medium has its strength and weakness. Different media can be combined in such a way that one can complement the other, thus making instruction more effective.

A study of the work of KEDI (conducted by a research team of air and correspondence education in 1974) indicated that of the correspondence course students, 60 percent seldom study, 28 percent study a little, 9 percent occasionally, and only 2 percent regularly. To date, these statistics have not changed significantly.

OF NOTE:

- A major problem in educational broadcasting is the difficulty of adjusting broadcasting time to provide convenient access to students. The commercial networks usually allocate educational programs time slots that are inconvenient for student audiences.
- The schools at which students are required to take classes every other Sunday are often situated far from the students' homes. This results in a low attendance rate. It may thus be necessary to establish more high schools in small cities in the future.
- Basically, the only standard qualification required for admittance into the air and correspondence schools is that middle school be completed. As a result, academic achievements of the air and correspondence high school students generally fall below those of regular high school students. A majority of the students have finished middle school several years before they come to correspondence school and, therefore, their academic preparation is often inadequate. Thus, supplementary instruction is necessary for these students to ensure effective learning.

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- "The Korean Air and Correspondence High School," Kye Woo Lee, Shigenari Futagami, and Bernard Braithwaite. A paper from *The Cost-effectiveness of Distance Teaching*, edited by Hilary Perraton (International Extension College) for the Education Department of the World Bank and prepared for the UNESCO colloquium on "Economic Analysis for Educational Technology Decisions," University of Dijon, June 1978.
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- "The Korean Educational Reform," Yung Dug Lee, unpublished paper, June 1976.

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LESOTHO DISTANCE TEACHING CENTRE

Lesotho

TARGET AUDIENCE:	The Basotho (people of Lesotho), especially those living in the countryside
OBJECTIVES:	To use distance-teaching methods to provide the people of Lesotho with practical education, and to assist other organizations engaged in education or training
MEDIA:	Print and radio, reinforced by interpersonal communication
DONORS/SPONSORS:	Government of Lesotho; Training for Self Reliance (World Bank); the International Extension College; World University Service; World Education; Christian Aid; the Irish Government; the Danish Government; UNICEF; Netherland Organization for International Cooperation; International University Exchange Fund; Agency for Personal Service Overseas; and others
DURATION:	Established in 1974; ongoing
CONTACTS:	Paud Murphy, Director, Lesotho Distance Teaching Centre, P.O. Box MS 781, Maseru, Lesotho; Sister Mary Molelle, Deputy Director, LDTC; James Hoxeng, DS/EHR/U.S. AID, Washington, D.C. 20523, U.S.A.

DESCRIPTION:

The Lesotho Distance Teaching Centre (LDTC) was designed and set up by the International Extension College at the request of Lesotho's Ministry of Education in 1974. *LDTC* functions chiefly as a correspondence school, producing radio and print courses for students unable or unwilling to attend conventional classes, but it is a service agency too. The *Centre's* primary commitments are to using indigenous talent and resources, maintaining institutional flexibility, tackling local problems, and integrating itself into as many aspects of community life as possible.

The *Centre* comprises several departments: Administration and Finance, Research/Writing/Editing, Layout, Production, and Radio. Typically, all the departments play a part in every project, so almost all staff members are acquainted with the full range of the *Centre's* activities. These activities are of four basic but related types. The first is developing and producing instructional materials for various public and private organizations (e.g., the Bureau of Statistics, Lesotho Family Planning Association, Catholic Relief Services). This function usually involves the client organization in needs assessment while the *Centre* (acting in a supervisory capacity) gives advice and estimates costs before it gets involved in training people or developing and testing materials. The second is helping students study privately for certificates at the junior (after three years of secondary education) and "O" (after 5 years of secondary education) levels. The *Centre* offers courses in modern mathematics, bookkeeping and commerce, English, and agriculture. These courses entail the use of printed materials, radio broadcasts, intensive weekend-instruction sessions, or all three. The third activity, still in its preliminary stages, is addressing the basic educational needs of young drop-outs (particularly boys). Early efforts in this direction include the development of games aimed at improving the players' literacy and numeracy skills, the completion of surveys and basic research aimed at defining the needs and problems of this group, and drawing up a proposal (that UNICEF agreed to support in part) for developing learning materials with appeal to this and other disaffected groups. The fourth activity is producing booklets on practical subjects, such as cooking and first aid, for distribution to rural adults. A charge, often nominal (U.S. 5¢ in case of the cookbook), is made for all *Centre* services; but self-reliance, and not profit, is the justification.

LDTC makes special efforts to help public schools make use of its materials. It encourages unqualified primary-school teachers to enroll in its Junior Certificate courses by offering them fee reductions. It has also distributed three of its newly developed learning games to primary-school teachers on an experimental basis. At the secondary-school level, teachers who double as *LDTC* tutors unanimously claim that the training and course materials they receive at the *Centre* help them teach better in the classroom. In addition, some secondary schools carry *LDTC's* Junior Certificate materials in their libraries, and others have incorporated *LDTC's* broadcasts into regularly scheduled courses.

Since 1976, *LDTC* has gradually been moving under government auspices. Now officially a project of the Ministry of Education, *LDTC* is taking on an ever increasing percentage of Basotho staff at the top administrative levels and has acquired new headquarters on the Lerotholi Polytechnic campus.

RESULTS:

LDTC spends more time and other resources assessing the needs of its target audience than evaluating the final results of its products. The evaluation that does take place tends to be conducted on a project by project basis, and highly readable and carefully wrought reports (which are available to the public for the cost of postage) serve as guides to other education and development planners. A sampling of these reports imparts a feeling for the Centre's methods of research, priorities, and range of interests, but does not provide a precise measure of *LDTC*'s impact.

A few *LDTC* projects have been assessed in quantitative terms. For example, a questionnaire filled in by the nurses at the Catholic Relief Services-sponsored clinics revealed that 20,000 copies of the cookbook produced by the Centre for CRS had been sold as of April 1976, that nurses believed that the books should be distributed to all women (not just clinic patients), that the number of recipes should be increased, that more recipes should call for only home-grown ingredients, and that more should be simple. (A parallel poll of the cookbook buyers confirmed these findings, which were made the basis of the revisions on the second run of 10,000 booklets.)

LDTC's staff, which numbered six in 1974, had grown to forty by 1977. In those same three years, the number of projects it was involved in during a single year grew from one in 1974 to four in 1977. In like manner, its economic base has grown more solid: in its first year of operations, its credits and debts balanced at around \$30,000; at the end of its third, its operating budget had increased by a factor of five and it had a small surplus with which to begin the new year. Student enrollments in courses of all types increased from 50 in 1974 to 840 in 1977, while the number of agencies to which the Centre contracted its services increased from two to ten. During 1977, about 20,000 booklets were distributed to individuals and groups.

OF NOTE:

- REKA ("Shopping," which is based on the University of Massachusetts' "Mercado" game), one of the games developed by *LDTC* to promote numeracy, uses two packs of cards — one represents money and one represents familiar goods. The game can be played at two levels of difficulty; one form usually entails good-natured shouting matches between the player designated as the shopkeeper and the "consumers."
- *LDTC* carries out research related to its activities. Typical publications include "A Test of the Best Way to Present a Correspondence Lesson," "Literacy in Lesotho," and "An Experiment with Educational Radio Spots." A major *LDTC* publication is *Understanding Print*, a continuation of the work of Holmes, Fuglesang, and others on the ways in which rural people understand illustrations and printed texts.
- A persistent problem *LDTC* encounters as a service agency is getting by financially during the time it takes for approved projects to receive funds.
- *LDTC* designed and produced handbooks, a newsletter, and a poster for the Thaba Bosiu Rural Development Project agents in charge of marketing improved seeds and fertilizers in rural Lesotho. It also worked up eight one-minute radio spots for the project and issued a short evaluative report on the overall effort.

REFERENCES:

Untitled reports, Lesotho Distance Teaching Centre, 1976 and 1977.

Understanding Print, Lesotho Distance Teaching Centre, July 1976.

Growth Centres in Lesotho, Elize Moody, Communication of the Africa Institute, No. 29, Pretoria, 1975.

"Catholic Relief Services Booklet Evaluation," Lesotho Distance Teaching Centre, January 1977.

"Games to Learn by," Lesotho Distance Teaching Centre, undated.

MAURITIUS COLLEGE OF THE AIR Mauritius

TARGET AUDIENCE:	Mauritian adults and children, especially those in unsubsidized secondary schools
OBJECTIVES:	To provide educational opportunities to learners outside the school system and to enhance in-school programs
MEDIA:	Radio, television, printed matter, interpersonal communication
DONORS/SPONSORS:	The Mauritius Ministry of Education, the Voluntary Committee on Overseas Aid and Development; Technical Assistance: The International Extension College (Cambridge, U.K.)
DURATION:	Established in 1972; ongoing
CONTACT:	Mrs. M. Seetulsingh, Head, Production and Administration Department, District Courthouse, Moka, Mauritius

DESCRIPTION:

Chartered in 1971 and organized in 1972, the *Mauritius College of the Air* (MCA) is an education center staffed by fewer than 20 people and committed to the use of radio, television, correspondence, and face-to-face contact to reach Mauritians both within and outside the traditional school system. MCA's primary in-school audience has been the roughly 80 percent of all secondary school students enrolled in private schools (which receive little government aid). Its other constituents include teachers, students of vocational technology, business students, government employees, and other groups bound by special interests or needs.

MCA's orientation is practical in two ways: the college was designed to enhance rather than to replace the existing school system, and its courses cover what it considers most vital to the country's future well-being. The college's attempt to upgrade instruction at private schools amounts to the attempt to equalize educational opportunity since such schools typically have less qualified teachers and both poorer and fewer teaching materials than their government counterparts do. The college's claim to serve national goals has led to involvement in community-development campaigns, in career counselling, in vocational education, and in teacher training.

In conjunction with in-school programs, the MCA provides each participating class with a television set and a radio, and each student with several 30-40-page instructional booklets. It also conducts seminars for classroom teachers (at which the coursework is previewed and evaluated, and related class projects are planned). Since 1973, programs conducted in secondary schools also feature a liaison service: liaison officers report on teachers' interest in and response to seminars and classes while keeping the teachers informed about the MCA's activities.

Nonformal education projects have characteristically involved radio broadcasts backed up by regularly scheduled tutorials or seminars and by printed self-study aids. Some such projects have allowed individual learners to progress at their own pace, while others have been geared toward group learning.

RESULT:

The number of student/subjects enrolled in MCA's secondary school courses increased from 3,432 in 1973 to 12,120 in 1974. The number of schools that volunteered to cooperate during that same period increased from 34 to 61. By 1976, however, the participation had declined to about 7,500 student/subjects in 44 schools — a direct reflection of MCA's commitment to the program vis-à-vis its other commitments.

Self-evaluation has been a chief determinant of MCA's evolution. The college has dropped Creole-language broadcasts in conjunction with on-the-job education programs because the courses seemed too demanding for the audience. It has dropped some of its industrial arts courses for want of trained instructors and curricula specialists. It has also de-emphasized its independent study courses in the belief that the college's resources should be marshalled to serve the many rather than the few. On the other hand, its successful involvement in *Ma Vie De-main* (a family planning campaign sponsored by the government) and in multi-media correspondence courses (such as "The Language of Business" for professionals) will influence its future direction.

The *Mauritius College of the Air* will in the future develop a public awareness program on the trade union movement, set up study centers and tutorial services for children and adults without access to traditional schools, strengthen its self-evaluation capabilities, and develop basic communication and numeracy courses for primary school drop-outs.

OF NOTE:

- Participants in the teacher-training courses were given the option of taking a course in one year, 18 months, or two years, and were not forced to decide until after they had worked the first lesson of the series.
- In 1973, the Ministry of Education offered to increase its financial and technical assistance to MCA if the college would intensify its involvement in secondary schools and scale down its experiments in nonformal education. The fivefold increase in student enrollment that followed led to the first direct government subsidy in 1974.
- The MCA maintains close ties to the colleges set up in Botswana and Lesotho by the International Extension College.
- The practical courses selected to replace subjects like Bible knowledge, British Constitutional History, and Latin in the secondary schools were introduced at the Form I level since examination pressures are weakest there.
- Efforts once channelled into now defunct agricultural education programs will soon be redirected into the government's national "Grow Your Own Food" campaign.
- When an increase in the cost of textbooks coincided with a book shortage in January 1977, the demand for MCA courses increased.

REFERENCES:

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"Annual Report of the Mauritius College of the Air: 1976-1977," MCA, (undated).

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RADIOPRIMARIA

Mexico

TARGET AUDIENCE:	Primary-school children (especially fourth-, fifth-, and sixth-graders) in the environs of the city of San Luis Potosí (approximately 2,075 children in 1975)
OBJECTIVES:	To increase the number of primary-school children served by six-grade primary schools without increasing the cost of the public educational system
MEDIA:	Radio, print, some visual aids, and interpersonal communication
DONORS/SPONSORS:	Mexico's Secretariat for Public Education
DURATION:	Begun in 1970 after a one-year pilot; ongoing
CONTACTS:	Concepción Rivera Guzmán, Directora, <i>Radioprimeria</i> , Dirección General de Educación Audiovisual, Calzada Circunvalación y Tabiqueros, México 2, D.F.; Peter L. Spain, Institute for Communication Research, Stanford University, Stanford, CA 94306, U.S.A.

DESCRIPTION:

Radioprimeria is a response to a shortage of teachers that is itself a reflection of a shortage of education funds. It was designed by Mexico's Secretariat for Public Education (SEP) to increase the number of Mexican primary schools at which instruction at all six grade-levels is offered. In practical terms, it enables one teacher to handle the three higher grades by shifting part of the teaching burden to the radio. The governing idea is that four teachers plus educational radio broadcasts can do the work of six teachers and do it at a relatively low total cost. The radio is not supposed to replace or displace classroom teachers but to buttress and to extend their efforts. It was originally intended to permit four- and five-grade schools to offer the complete primary curriculum and primary certificates.

The instructional radio lessons are prepared by eight radio teachers in DGEAD's (Dirección General de Educación Audiovisual y Divulgación) broadcast studios in Mexico City. They are then bused 260 miles northwest to Station XEXQ at the University of San Luis Potosí, which broadcasts them without charge from 9:00 a.m. to 1:45 p.m. on Monday through Friday. These lessons typically occupy 90 minutes of each five-hour school day. Eighty percent of them are directed toward all three upper grades, while the remaining 20 percent are geared toward specific grades. All make repeated reference to the textbooks distributed free by SEP to all Mexican primary schools, all are discussed in a fortnightly mimeographed teacher's guide and program schedule ("*Correo de Radioprimeria*"), and a few are accompanied by visual aids. The 1,250 programs needed for a school year are broadcast at the rate of five or six per day and focus on Spanish, arithmetic, history, and geography, covering nature studies, practical activities, and physical education in less depth.

Radio-classroom teachers, most of whom commute either daily or weekly between their homes in the city and the rural communities they serve, are given an introduction to the *Radioprimeria* system, but teacher turnover is so great that some confusion and misunderstanding on their part is inevitable. Similarly, they are supposed to be subject to supervision and periodic on-the-job inspections, but controls have been exercised in a hit-and-miss fashion. On the other hand, much is required of both the inspectors and the teachers. Inspectors, for example, are expected to furnish their own transportation for use on the job, while many teachers personally supply the classroom radio. Neither transportation nor radio maintenance is provided systematically by SEP.

Enrollment in *Radioprimeria* has fluctuated. Originally, 49 schools (and some 2,800 children) representative of those eventually to be served by a nationwide *Radioprimeria* system were involved in the program. The number of involved schools dropped for several consecutive years before climbing to 65 in 1975. However, the *Radioprimeria* lessons are now directed only at fifth-graders, so the total number of children reached by *Radioprimeria* is smaller (2,075).

Other changes of importance are the switch to a larger radio transmitter in 1973, which expanded *Radioprimeria*'s reach by 20 to 40 kilometers in all directions, and the introduction of a new lesson format in 1974 that features dramatized interchanges between teachers and students instead of lectures.

RESULTS:

The lack of strictly comparable control groups, reliable enrollment statistics, and other evaluative tools clouds the meaning of data on *Radioprimary's* impact. However, investigations of the project's effectiveness have been quite far-reaching, taking into account community attitudes toward education in general, employment patterns and prospects, and both technical and administrative pitfalls, as well as test scores and other conventional indicators of educational success.

Children in the radio classrooms perform at least as well as their counterparts in regular classrooms do on standardized achievement tests. But this finding must be viewed in light of the fact that the great majority of radio classes (an estimated 80 percent) are in schools that had six grades before the project began (and are thus not the intended beneficiaries). Moreover, power failures, other technical problems, a lack of administrative guidance, shortages of resources, and teachers' reluctance to use the system have all militated against *Radioprimary's* success. When 44 radio schools were visited by evaluators in 1972, for example, one was inexplicably closed while 18 others were not making use of the radio lessons.

Surveys conducted in 1972 of teachers' pedagogical beliefs, the activities of primary-school graduates in the San Luis Potosí area, attitudes of rural people in the area toward rural education, and the local job market revealed that students, their families, their teachers and their prospective employers regard a primary certificate as an employment credential that is necessary but not sufficient. These studies showed that few primary-school graduates make practical use of their educations and that while most do not leave their hometowns, the few who do move to the city cannot expect their schooling to win them jobs in an employment market flooded with secondary-school graduates.

OF NOTE:

- Most lessons are used year after year, so a child who has spent three years in a radio classroom has heard some of the taped broadcasts three times.
- Before 1975 (the last year the project covered students other than fifth-graders), students in radio classrooms were expected to engage in private study while lessons not intended for their grade were broadcast.
- Well over one hundred schools request the *Correo*, even though only 65 of them make use of the radio broadcast. Apparently, the *Correo* helps teachers in ordinary classrooms prepare their courses.
- An objective of *Radioprimary* at the project's outset was to extend educational opportunities via radio to people over 15 who had not finished primary school. Nothing has been done to realize this objective, however.
- Although public education commands the largest single share of Mexico's national budget, only about a fifth of Mexico's primary schools have the full six grades.
- *Radioprimary* is thought to have a large incidental audience composed of adult listeners in Mexico City and San Luis Potosí. Some broadcasts are also picked up by classrooms not involved in the program, though the number is not known.

REFERENCES:

"The Mexican *Radioprimary* Project," Peter L. Spain, *Radio for Education and Development: Case Studies*, Vol. I, World Bank Staff Working Paper No. 266, May 1977.

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TARAHUMARA RADIO SCHOOLS

Mexico

TARGET AUDIENCE:	Children and other residents of the Tarahumara Sierra (especially its 50,000 Indians)
OBJECTIVES:	To meet the practical and academic needs of Tarahumaran Indian children and adults by increasing their social and employment opportunities while reinforcing their cultural identity
MEDIA:	Radio (until 1974), printed materials, and interpersonal communication
DONORS/SPONSORS:	The Catholic Church as represented by the Vicar Apostolic of the Tarahumara region; limited support from agencies of the Mexican Government
DURATION:	Begun in 1955 as extensions of the 50-year-old Jesuit-run educational programs; granted legal status as a part of Mexico City's Iberoamerican University in 1957; ongoing in modified form (without radio)
CONTACTS:	Director, Jesuit Mission Headquarters, Sisoguichi, México; Sylvia Schmelkes de Sotelo, Centro de Estudios Educativos, Avenida Revolución 1291, México 20, D.F. México; Dean T. Jamison, The World Bank, 1818 H St., N.W., Washington, D.C. 20433, U.S.A.

DESCRIPTION:

The *Tarahumara Radio Schools (TRSs)* have roots in the Jesuit missions that have operated in the Sierra Tarahumara since 1900. But while the charter of the children's boarding school that opened in 1900 called for the eradication of "barbarism, pagan atmosphere, and ignorance," the schools have not weathered pedagogical revolutions unfazed. Emphasis now falls upon practical education informed by Freirean precepts -- though the sobering difference between goals and achievements, particularly with respect to reaching the target audience, cannot be denied.

The 1970s have been uneasy times for the *TRSs*. Alarmed by high dropout and absentee rates and aware that the schools were benefitting primarily the Spanish-speaking population rather than the Indians for whom they were principally intended, *TRS* project authorities asked the Centro de Estudios Educativos to assess the schools' impact. In 1971, members of this Mexico City-based research organization visited the Sierra Tarahumara to collect information on *TRS* teachers, students, graduates, and the families of students. To redefine the objectives and functions of the schools, they had first to calculate the true impact of existing objectives and functions.

At the time of the study, 46 schools that together served 1,081 students dotted the ten Sierran municipalities. Each school had one or two auxiliary teachers. These auxiliaries, themselves educated only through primary school, organized the classes around radio broadcasts (of government-selected curricula) transmitted centrally from mission headquarters in Sisoguichi, counselled students and checked their work, and attended summer training courses in teaching methods and the subjects they taught. The classrooms they supervised typically contained students of all four primary grades. To accommodate the mixed needs of all students, the radio programming covered a different subject each hour, devoting 15 minutes to each grade level. Students tuned in for one quarter-hour segment each hour, completing written exercises for the remaining 45 minutes until a new subject was taken up. Five of the 46 schools open in 1971 were boarding schools whose students returned home on the weekends.

Several sweeping changes had taken place by 1975, the most important of which was that radio use was dropped entirely. In addition, summer courses for auxiliary teachers had replaced the goal of proficiency in subject matter and methodology with that of mastery of local customs and language. New bilingual teaching methods had been put into use, the unintegrated schools had been shut down, and both school supervision and materials had been upgraded.

RESULTS:

While the lengthy statistical and analytical evaluation conducted in 1971 showed that the TRSs prepare fourth-grade students about as well as do schools in the capital, such a tiny proportion of TRS students finish the fourth grade that the more important questions relate to the determinants of enrollment in and completion of the courses. To answer such questions, the research team identified many predictors of success in the children's socioeconomic environment.

Tarahumara Indians, few of whom speak Spanish and thus comprehend the Spanish broadcasts, fared less well than their non-Indian peers in overall mean achievement (in language but not arithmetic skills) and were much more likely than their counterparts to fall farther behind as they advanced through the grades. These results, researchers contend, together suggest that cultural and linguistic factors militated against Indian children in the program. Variables that correlated with interyear dropout rates included opportunity costs (what it costs to replace or do without a child's help at home or work), the level of the child's father's education, and the child's ethnic background. To the population sample, education appeared to have more to do with prestige or with some notion of school as an innate good than with the expansion of employment opportunities — a finding confirmed by employment data as well as by interviews with students, graduates, and their families.

The evaluation, which was used as a basis for some of the changes made in the program in the early 1970s, also covered teachers' qualifications and duties, school policies, and the curriculum.

OF NOTE:

- Since 1971 the Tarahumara Sierra has been the site of Presidential visits and of development activities sponsored by the National Indian Institute, the Administrative Committee for the Federal Program of School Construction (which has built boarding schools to prepare Tarahumaran community-development workers), the Ministry of Public Works, and the National Institute of Rural Community Development. The thrust of the projects initiated by these agencies is toward the integration of the Tarahumara into Mexico's national life.
- Radio use was discontinued partly because delays caused by equipment failures interrupted the flow of instruction.
- One reason the reforms proposed after the 1971 study failed is that missionaries with 15 years of experience in the radio schools were understandably leery of adopting sweeping changes suggested by outsiders. They also resisted the idea of shifting the program's emphasis away from reaching young children.
- Although designed from the beginning to serve young children in a formal school setting, the TRSs were influenced by Colombia's *Radio Sutatenza* — a nonformal education program primarily for adult *campesinos*.
- Some of the factors that have governed the evolution and reform of this project are those that impede "education for development" in many Third World countries. The Sierra Tarahumara is an agricultural region, one of Mexico's remotest and most mountainous areas. Its dispersed population consists of Indian and non-Indian (mainly *mestizo*) groups that have not mixed except in commerce, and its resources have been exploited primarily by non-Indians and outside companies.

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"The Radio Schools of the Tarahumara, Mexico: An Evaluation," Sylvia Schmelkes de Sotelo, *Radio for Education and Development: Case Studies*, Volume I, World Bank Staff Working Paper No. 266, May 1977.

Radio For Education and Development, Dean T. Jamison and Emile G. McAnany, Sage Publications, 1978.

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EDUCATION AND HUMAN RESOURCES

RADIO EDUCATION TEACHER TRAINING PROJECT

Nepal

- TARGET AUDIENCE:** Untrained primary school teachers with less than School Leaving Certificate academic qualification (approximately 6,000 teachers)
- OBJECTIVES:** To increase academic and teaching skills of the target population located primarily in the very remote areas of Nepal; to create the infrastructure for the institutionalization of radio education into the education system of Nepal
- MEDIA:** Radio, print, interpersonal communication
- DONORS/SPONSORS:** Nepal's Ministry of Education, Radio Nepal, U.S. Agency for International Development (AID), Southern Illinois University at Carbondale, UNICEF, UNESCO, British Council
- DURATION:** 1972 - ongoing
- CONTACTS:** Mr. Shreedhar Lohani, Director, Curriculum, Textbook, Supervision, Development Center, Kathmandu, Nepal; Charles B. Klasek, Director, Office of International Education, Southern Illinois University, Carbondale, Illinois 62901, USA

DESCRIPTION:

The arrival of free and compulsory education in many developing countries, coupled with a decline in the student drop-out rate, has caused the demand for teachers to rise considerably. In Nepal, the demand was greatest for primary school teachers in rural areas. His Majesty's Government of Nepal, recognizing the potential for the use of radio in education, began working with the U.S. Agency for International Development (AID) in 1972 to expand its capability to use radio. Southern Illinois University was selected to provide technical assistance and the SIU team leader arrived in Nepal in 1978. The main objective established for the Radio Education Teacher Training Project (RETT) was to develop and test a training program for untrained rural primary school teachers through the medium of radio, reinforced by written, self-instructional materials and periodic workshops. The project has attempted to create a cost-effective process for assisting teachers to meet basic certification standards while continuing to live and teach in their villages. The long-range goal of the project is to provide the facilities (transmitter, antenna, recording studio, radio receivers) and staff (script writers, producers and technicians, and evaluators) to develop an ongoing program of radio education in a wide variety of subject matter areas for many different audiences of varying ages and interests.

The one national radio station, Radio Nepal, currently uses one medium wave and two short wave transmitters to broadcast a single, commercial-type (news, music, special interest programs) throughout the country. It is estimated that 85 percent of the geographical area and 95 percent of the population is served. The station was proud of its service to the entire country and looked forward to receiving new, modern equipment. Even prior to the arrival of the new transmitter, Radio Nepal provided air time during the prime time from 5:30 to 6:30 in the evening to the RETT program.

In 1979 four technical advisors arrived and participant training began in preparation for the Pilot Program for 100 teachers to be carried out the following year. Selected writers and producers from RETT and Radio Nepal were sent abroad for special training. In addition, special in-country training was provided for junior technical assistants of Radio Nepal in basic maintenance of electronic equipment.

The first full-year program for 1,000 enrolled teachers began in 1981. The curriculum designed for these teachers stresses the content skills and teaching methods which are the prerequisite for implementing Nepal's Primary School Curriculum for children. Individual radio scripts and written materials were prepared in the subjects of education, health, and physical education for a total of 165 programs. Each enrolled teacher was expected to listen to a one-hour broadcast five days a week for about ten months. The written materials summarize the broadcast and become a kind of scripted lesson plan which the teachers can implement directly in their classroom. Each hour-long broadcast consists of two 20-minute formal teaching sequences separated by a 20-minute non-formal sequence. The non-formal segment provides information relevant for the participants' personal use and entertainment, while programming in the formal segment provides content for classroom use and models teaching methodology.

RESULTS:

The major goals as set forth for each of the first four years of the formal project have been met. All self-instructional materials for a full year of operation will have been printed and delivered by June 1984, and 6,000 teachers will have been trained within the project. By the summer of 1982, the central staff consisted of fourteen writers, one administrator, three radio producers, one radio engineer, and two evaluators. All radios were delivered and were ready for use.

A new recording studio has been completed and the writers, radio producers, and evaluators have their offices there. The transmitter and antenna have been delivered to Nepal and are in use. Additional funds have been appropriated by AID to air-condition and sound-proof the studio.

A total of 60 research reports have been completed and published. The research data indicate that the radio signal of Radio Nepal can be received in every part of the country where tests have been made, and this includes sites in every development zone. Pretest and post-test data show that teachers can learn through this type of instruction. The teachers have indicated that they like the programs, find them interesting, and that they are teaching better as a result of being enrolled in the program.

OF NOTE:

- The teachers enrolled in the project were told that if they participated fully in the program and successfully passed a certification examination, they would be certified and be eligible for a salary increase. This proved to be a strong motivator for conscientious participation.
- Since electricity is almost nonexistent in Nepal, solar collector panels were explored as a possible energy source for radios. It was found, however, that regular D-size batteries provided a more inexpensive and reliable source of energy.
- Despite the great difficulty involved in writing and sending a letter from the remote areas of this country, thousands of letters have been received in the RETT Office from participants. Project staff have designed numerous programs around this correspondence.

REFERENCES:

"Teacher Training Via Radio in Nepal" by Burton C. Newbry. Development Communication Report, No. 24. Washington, September 1978.

"Upgrading the Village Teacher Through Radio in Nepal" by Jack W. Graham. Unpublished paper written for the Ministry of Education and Culture, Nepal, July 1982.

"An Integrated Curriculum for Rural Teacher Training" by Kathleen Krumhus-Goodman, Research Report No. 43, Southern Illinois University, USA.

Clearinghouse on Development Communication
April 1983

RADIO MATHEMATICS

Nicaragua

TARGET AUDIENCE:	Primary-school children in Nicaragua
OBJECTIVE:	To develop a prototypical system for teaching elementary mathematics
MEDIA:	Radio, reinforced by classroom instruction and printed materials
DONORS/SPONSORS:	The Technical Assistance Bureau of the U.S. Agency for International Development; the Government of Nicaragua
DURATION:	Initiated in July of 1973; ongoing through June of 1979
CONTACTS:	Ms. Jamesine Friend, Apdos. 122, Masaya, Nicaragua; Dr. Barbara Searle, Institute for Mathematical Studies in the Social Sciences, Ventura Hall, Stanford University, Stanford, CA 94505, U.S.A.

DESCRIPTION:

The Radio Mathematics Project is an attempt to design and broadcast elementary math lessons that hold children's interest. One part of the project is curriculum development. Another is the creation of a way to use performance data to revise and improve the lessons. A third is the analysis of the mathematical skills and concepts taught in the lessons. Underlying all three activities is the development of radio as an instructional medium.

The project began in July of 1973. Once the staff had selected the site, it prepared a detailed research plan and tested sample lessons in California schools. By mid-1974, the Nicaragua office was organized and was developing both achievement tests and procedures for the program. By 1975, 150 lessons were being used in 16 experimental classrooms. More than 85 first and second-grade classes were using the radio math lessons as of the summer of 1976.

Each radio math lesson consists of a 30-minute recorded portion and a post-broadcast portion conducted by the classroom teacher with the help of a two-to-three-page guide. A typical lesson consists of many discrete instructional and entertainment segments, all but a few of which require an average of four active responses (writing answers, responding aloud, singing) per minute from the student. The lessons rely on little direct explanation, cover many topics, and elicit several kinds of responses from the children. Post-broadcast activities take up at least 30 minutes and involve use of the blackboard. Until 1975, worksheets were also part of almost every lesson.

RESULTS:

A year-end achievement test given in 1975 showed that children in classes that used the radio math series scored 21 percent higher than their peers who studied math in a traditional learning environment. The second-year evaluation revealed an even greater disparity. First-graders performed 60 percent better than their counterparts in the control group, while second-graders had a 29 percent edge over their counterparts.

At the close of the 1975 school year, 73 percent of the participating teachers said that the children in the radio math program learned more than they would have in the conventional classroom. Ninety-two percent voiced the hope that the radio instruction program would continue.

With AID support, the *Radio Mathematics Project* has been extended through June 1979. Current efforts revolve around revising the curriculum, experimenting in the use of radio instruction without the worksheet component in order to cut costs, and extending the radio project to include students in higher grades.

OF NOTE:

- One lesson in the *Radio Mathematics* series was awarded the Japan Prize in the 11th bi-yearly International Educational Programme Contest, to which 92 organizations from around the world submitted entries.
- The *Radio Mathematics Project* was expanded at the behest of the Nicaraguan Ministry of Education to bring radio lessons to three different departments of the country.
- At least once a minute in every radio program, students are invited to respond actively to what they hear.
- Bottle caps and other locally available cost-free items are used in the classroom as counting aids.

REFERENCES:

"*The Radio Mathematics Project: Nicaragua 1974-1975*," Barbara Searle, Jamesine Friend, and Patrick Suppes, Institute for Mathematical Studies in the Social Sciences, Stanford University, Stanford, California, 1976.

"Evaluation of The Radio Mathematics Project," Barbara Searle, Paul Matthews, Jamesine Friend, and Patrick Suppes, unpublished, October 1976.

Clearinghouse on Development Communication
June 1977

RURAL RADIO EDUCATION PROJECT

Paraguay

TARGET AUDIENCE:	Rural out-of-school children and adults (approximately 700 students in 1978)
OBJECTIVES:	To provide primary level instruction to rural people via radio; to experiment with different methodologies and techniques for providing rural radio education; to help the Ministry of Education and Worship in Paraguay institutionalize mechanisms for making rural radio programs feasible and effective
MEDIA:	Radio, print, and interpersonal communication
DONORS/SPONSORS:	The Center of Tele-Education of the Ministry of Education and Worship, Asunción, Paraguay, and the U.S. Agency for International Development
DURATION:	Begun in 1976; ongoing
CONTACTS:	Lic. Mabel Palacios Moringo, Directora, Centro de Tele-Educación, Ministerio de Educación y Culto, Asunción, Paraguay; Donald Swanson, Academy for Educational Development, 1414 22nd St., N. W., Washington, D. C. 20037, U.S.A.

DESCRIPTION:

Paraguay's Ministry of Education and Worship became involved in the production of educational radio broadcasts four years before the *Rural Radio Education Project (RREP)* took shape. Since 1972, it had supported the annual production of between 50 and 60 hours of radio programming for use in primary and secondary schools. Sponsoring *RREP* thus entailed the expansion, rather than the creation, of administrative and technical capabilities in order to produce roughly 300 hours of programming per school year. With a five- to sixfold increase in production, the Ministry hopes to offer rural Paraguayans, many of whom have no access to schools with full six-grade curricula, the chance to complete primary school. Accordingly, the Department of Caaguazú was selected as the project site because its educational needs and handicaps are typical of rural Paraguay's and program emphasis was placed on courses at the upper primary grade levels.

The Department of Tele-Education spent 1977 designing the radio curriculum and the instructional materials, preparing and pre-testing radio lessons, and conducting on-site research activities. During this period, department members developed 540 instructional programs at the third- and fourth-grade levels, along with companion materials in print, and made plans for producing these radio programs. Their research efforts consisted primarily of studying the student-age population of Caaguazú and its radio-listening habits, and of selecting four towns in Caaguazú as test sites and organizing project centers in them.

The second year of the project, 1978, was dedicated to improving and building upon the foundations laid during the first. The first 540 programs went into production while outlines for the second 540 (the fifth- and sixth-grade lessons) were drawn up. Broadcasting via a commercial radio station began, and research activities and field-testing continued.

On the brink of full-scale implementation, the project as of mid-1978 serves over 700 students and includes 45 learning centers (at which anyone with two years of formal schooling can take *RREP's* entrance exams and students in the program meet in groups and receive the help of volunteer monitors). The completed lessons cover language (including Spanish as a second language), mathematics, social studies, science, health and nutrition, and communication. These lessons are broadcast in 15- to 20-minute programs on weekdays.

RESULTS:

The *Rural Radio Education Project's* evaluation component has not been running long enough to permit an evaluation of learning gains. However, evaluative activities have been conducted in conjunction with this project since its inception, and preliminary findings have influenced the project's evolution. High interest among members of the community (particularly with respect to enrollment and attendance) and among radio-station owners (who have volunteered to rebroadcast programs and to dedicate prime time to some *RREP* broadcasts) are especially positive indicators of the project's impact. These indicators make some of the potential handicaps uncovered in baseline and first-year research — the prevalence among the listeners of serious social problems such as alcoholism, for example, and the difficulties posed to some *RREP* students by Spanish-language broadcasts — easier both to cope with and to put into perspective. Formative evaluation efforts have also showed that the listening audience has a strong interest in music and sports, one of many findings that poses no problems but gives the programmers some guidance.

The first comprehensive evaluation of student gains will get under way in March of 1979 at the end of the first full cycle of classes. Eventually, cost-benefit analysis will be conducted, the effectiveness of the various program components (radio, monitor/aid, etc.) will be assessed, and the relative gains made in all the communities involved in the project will also come under scrutiny.

OF NOTE:

- The use of free commercial radio is fundamental to the conception and the success of the *Rural Radio Education Project*.
- To meet the mixed demands of the learners, the educational broadcasts are in *Guarani* and Spanish while all the printed supplementary materials are in Spanish.
- Broadcasting began under extremely adverse conditions. Production took place in a borrowed studio, and power failures in both the stations and the listeners' homes were frequent.
- Before curriculum design could proceed apace, the Ministry of Education had to agree upon a precise definition of "primary instruction." Only then could the Ministry successfully undertake the formidable task that took up the first year of the project — creating from scratch a rural radio primary-school curriculum.
- A special series of Saturday-morning broadcasts aimed at familiarizing the population of Caaguazú with radio-education techniques was conducted throughout the first year of the project. The broadcasts were also used to win over regular schoolteachers, many of whom felt threatened by the new system.
- A series of pre-project interviews revealed that 70 percent of the population regarded agriculture as the most important lesson theme. Hence, agricultural information and advice are woven into the coursework, particularly into the literacy and language courses.
- Test sites also serve as administrative centers.
- While *RREP* workbooks have been received enthusiastically, less expensive alternatives to them may have to be developed.

REFERENCES:

"Annual Report: Rural Radio Education/Paraguay," Academy for Educational Development, January 1978.

Unpublished project documents, Academy for Educational Development, 1976, 1977, and 1978.

Clearinghouse on Development Communication
July 1978

SPEAK MANDARIN CAMPAIGN
Singapore

TARGET AUDIENCE:	The Chinese population of Singapore
OBJECTIVE:	To replace Chinese dialects with Mandarin Chinese
MEDIA:	Press, radio, television
DONORS/SPONSORS:	Government of Singapore
DURATION:	1979; ongoing
CONTACTS:	Dr. Eddie C. Kuo, Department of Sociology, National University of Singapore, Kent Ridge, Singapore 0511; Mr. Lee Seng Giap, Head of the Mandarin Campaign Secretariat, Ministry of Communication and Information, Republic of Singapore

DESCRIPTION:

The sociolinguistic situation in Singapore is complex due to ethnic as well as linguistic diversity among the Indian and Chinese communities. The population is approximately 77 percent Chinese, 15 percent Malay, six percent Indian and two percent other origins. There are four official languages--Malay, English, Mandarin Chinese, and Tamil, while Malay is designated the national language. English is the major language of law, administration, education, and international trade. Mandarin is accepted as the language to represent Singapore's Chinese community in school, public speeches, and official functions, but it is not a native language for the majority of Chinese Singaporeans. In 1980, only 10.3 percent of the Chinese used Mandarin as the principle household language.

In 1979, the **Speak Mandarin** Campaign began. The government had recognized the need for using a common language to educate the Chinese population and to preserve Chinese cultural traditions and values. To achieve this goal, the mass media played a key role.

The mass media in Singapore are structurally regulated and can be easily mobilized to support development objectives as defined by the government. Under the coordination of the Ministry of Communication and Information, the mass media have contributed to the implementation, assessment, and evaluation of the **Speak Mandarin** Campaign.

Even before the campaign was officially launched, media was used to express the government's endorsement of the program. The prime minister discussed the language problems in Singapore on television more than a year before the campaign began; a month before the campaign was launched, a forum on the "Promotion of Mandarin" was organized by the two major Chinese daily newspapers. Following the forum, all three leading papers carried editorials advocating the importance of Mandarin.

A mass rally, which was attended by several hundred Chinese community leaders and representatives of various Chinese associations and community groups, marked the official launching of the campaign in 1979. The rally was broadcast live on both television and radio. Since then many forums, news articles and broadcasts have contributed to the success of this campaign. From late 1979 to late 1980 during three televised forums, the prime minister made use of television to explain his views on the language issue in general and the **Speak Mandarin** Campaign in particular. In addition, the press, particularly the Chinese daily newspapers, has covered the promotional activities and printed editorials to comment on the campaign.

In support of the campaign (whose activities are focused during one month every year, usually in October), the Chinese press has also organized public forums, student debates, composition contests, story-telling contests, distribution of pamphlets, free T-shirts with campaign slogans, and prizes for customers heard using Mandarin at shopping places. The Chinese newspapers have displayed posters and banners in public places with campaign messages designed to promote the use of Mandarin for better communication and national progress. Campaign messages have, in addition, been inserted into newspapers as "fillers." Similar messages have been announced on the radio and flashed on television.

RESULTS:

Campaign assessment took place mainly through the press in a variety of ways. First, the day after the official campaign opening, all major newspapers reported not only the opening ceremony and the prime minister's speech, but also responses of people from differing backgrounds. The majority of the views expressed were enthusiastic and supportive. The two leading Chinese papers, in addition, published a special "campaign page" which reported public opinion every day during the first few weeks of the campaign. The views expressed in the Chinese papers were primarily of those with Chinese educational backgrounds, and were very supportive. The English language paper also ran special pages on the campaign. The English language paper represented Chinese with English educational backgrounds and non-Chinese. These readers were supportive as well, although they were more reserved.

A second form of feedback in the assessment of the campaign were editorials and letters to the editor. Again, these proved to be generally supportive with some suggestions and criticism. Finally, the press served in the evaluation of the campaign by conducting large-scale surveys of the campaign's effects. Through one newspaper survey in 1981 it was reported that 81 percent of Chinese Singaporeans between the ages of 12 and 19, were speaking Mandarin more often than they had before the campaign. The press has continued to carry out similar surveys in subsequent years.

OF NOTE:

- **Rediffusion**, the commercial cable broadcasting service, has reduced its programming in Chinese dialects and has a target of 80 percent Mandarin programming.
- Other government and nongovernment organizations have also been requested by the Ministry of Communication and Information to carry out surveys on language use in various domains (among bus passengers, taxi drivers, people visiting government offices, etc.) periodically. While some of these survey findings are reported by the mass media, most are classified as confidential and apparently are used only as reference materials by the Ministry.

REFERENCES:

Eddie C.Y. Kuo, "Mass Media and Language Planning: Singapore's 'Speak Mandarin' Campaign," Journal of Communication, Spring 1984 pp. 23-35.

Clearinghouse on Development Communication
January 1986

DEVELOPING COUNTRIES FARM RADIO NETWORK
Canada

- TARGET AUDIENCE:** Small-scale farmers of developing countries
- OBJECTIVE:** To increase food supplies and improve the health/nutrition of subsistence farmers and their families
- MEDIA:** Radio scripts, cassette tapes, print
- DURATION:** 1979; ongoing
- DONORS/SPONSORS:** Canadian International Development Agency, Massey-Ferguson Ltd., University of Guelph (Canada)
- CONTACT:** George Atkins, Director, Developing Countries Farm Radio Network, English Language Division, c/o Massey-Ferguson Ltd., 595 Bay St., Toronto, Ontario, Canada M5G 2C3; Developing Countries Farm Radio Network, French & Spanish Language Division, c/o University of Guelph, Guelph, Ontario, Canada N1G 2W1

DESCRIPTION:

As the populations of developing countries continue to grow, land formerly used for cultivating small-scale, domestic consumption crops is increasingly appropriated for larger-scale, export crops. This process puts pressure on the subsistence-level farmer to grow more crops on less land. When the Developing Countries Farm Radio Network (DCFRN) was established in 1979 the vast majority of small-scale farmers had been largely by-passed by most development programs aimed at increasing food supplies in the Third World. To help solve this predicament, DCFRN provides information on simple, practical farming methods in order to improve national agricultural self-reliance, nutrition, and the welfare of small producers.

DCFRN is committed to assisting small farmers increase their food supplies by providing established radio stations and other local channels of communication with packages of practical agricultural information. Information is assembled on appropriate, simple, transferable technologies used by grass roots-level farmers in the developing world to increase food production, decrease post-harvest losses, and to make more efficient use of food. Only practices that have been developed, tested, and proven in the developing world, and are adaptable in other developing countries are included in DCFRN's information packages. There should be no or very low implementation costs, by relying only on local resources, and requiring neither chemicals nor unfamiliar types of plants or breeds of animals. Also, the advocated methods need to be straightforward enough to communicate effectively by radio.

Information packages consist of up to 17 radio scripts, an optional cassette on which all scripts in the package are recorded, and The Blue Sheet, the Network's newsletter. Packages are available in English, French, and Spanish. The simple scripts are written so that local broadcasters and other agricultural communicators -- the links between DCFRN and farmers -- can readily interpret the materials linguistically and culturally for the farmers they serve. They include illustrations to help communicators understand what they are conveying. Scripts cover a wide variety of agricultural or health and nutrition issues, all within a development context. Agricultural topics have ranged from improving manure to getting more milk from dairy cows. Each package also contains at least one script on rural health problems.

The Blue Sheet, in addition to providing up-to-date information about the Network, also covers other development issues not found in the radio scripts. "The Professional Improvement Corner," a regular column, gives broadcasters pointers on how to make their broadcasts more captivating for listeners, and many such recommendations come from Network participants.

Feedback from the Network's participants is crucial in compiling subsequent material for distribution. The only requirement for receiving the free scripts and cassettes is that an enclosed information poll be filled out and returned to DCFRN headquarters. Participants are asked which segments were found to be most useful, as well as questions whose answers determine the content of future packets. There is also room for comments and suggestions. This data is then collected, analyzed, and integrated into later packages.

RESULTS:

Overall, DCFRN has proven itself as an educational tool. Its success is perhaps best evidenced by the fact that over 600 rural communicators in more than 100 countries regularly disseminate DCFRN information in more than 100 languages. Through radio alone the information is estimated to reach over 100 million listeners. Feedback from participants shows that farmers receive and use information that is appropriate to their particular needs.

OF NOTE:

- In addition to radio broadcasts, DCFRN information has been used in farm and health extension work, newsletter and newspaper articles, government pamphlets, posters, classroom teaching, video tapes, filmstrips, loudspeaker broadcasts, puppet shows, and in other ways.
- Information communicated is totally non-political and the scripts are prepared in a culturally and religiously neutral style in order to appeal to as many listeners as possible. A personable, informal style is followed, as if one farmer were advising another.

REFERENCES:

- "Background Information," The Developing Countries Farm Radio Network, Toronto, January 1984.
- "The Developing Countries Farm Radio Network," L.G. Aked, Department of Agriculture, Lusaka, Zambia.
- "Guess What I Heard on the Radio?" International Agricultural Development, United Kingdom, March 1981.
- "Serving Agriculture, the Basic Industry," The Christian Farmer, Vol. XVII, Winter 1984.
- "The Voice of Agriculture," African Technical Review, United Kingdom, February 1985.

Clearinghouse on Development Communication
March 1986

ACCIÓN CULTURAL POPULAR (ACPO) Colombia

TARGET AUDIENCE:	Colombian <i>campesinos</i> (small farmers)
OBJECTIVE:	To provide subsistence farmers with basic education
MEDIA:	Radio, printed materials, interpersonal communication (supported by slides and films)
DONOR/SPONSOR:	ACPO is virtually self-supporting; 7 percent of its income comes from government sources, other grants of money or technical assistance have been made by Family Planning International Assistance and by World Education
DURATION:	Founded in 1947; ongoing
CONTACT:	Monsignor José Joaquín Salcedo, Acción Cultural Popular, Apdos. Aéreo 7170 Nal. 3262, Calle 20 No. 9-45, Bogotá, Colombia

DESCRIPTION:

Acción Cultural Popular began in 1947 as the handiwork of a 25-year-old Catholic cleric, José Joaquín Salcedo. An attempt to use radio to provide subsistence farmers with the knowledge critical to both personal and community development, ACPO first broadcast from a single radio station in Sutatenza.

What was once an experiment has become an institution. *Acción Cultural Popular* now airs basic education courses in literacy, numeracy, health, building, hygiene, economics, and personal development. It runs a training program to prepare its own staff of 900 for communications and development work; it sponsors a correspondence service; it publishes a weekly newspaper and operates a printing press; it offers short extension courses of immediate or local interest; it sells hundreds of thousands of books each year at cost to *campesinos*; it sends education and entertainment vans into the countryside to show films and pass out printed materials; and it develops new audiovisual aids and new curricula on an ongoing basis. At the moment, ACPO is also engaged in self-evaluation and a family-planning campaign it has dubbed "responsible parenthood."

The heart of ACPO, the radio school, embraces 22,000 study groups. The Radio Sutatenza groups are organized by local *campesinos* who schedule meetings, keep records, direct discussions, and counsel other group members. Learning cells rely on six cost-free textbooks that stand as a permanent record of the broadcast messages. These simple texts help the students acquire basic language and computational skills and present practical development-related information.

RESULTS:

An in-house evaluation of ACPO conducted in 1976 showed that 23 percent of the *campesinos* interviewed in five representative communities participated in the radio school, that those reached by Radio Sutatenza prefer it to any other station and that the number of community improvements in many areas correlated to the number of radio school participants. It also showed that, among other things, more listeners complete the basic courses than receive certificates for doing so.

The most telling indicators of ACPO's success are, however, its 30-year survival, its financial independence, and its growth. Radio Sutatenza now reaches 140,000 *campesinos* who address between 75,000 and 80,000 letters and requests to the station each year. More than 11,000 community organizers have passed through the institutes and returned to their homes to combat poverty, disease, erosion, runaway population growth, poor sanitation, and illiteracy. Moreover, at least 15 other Spanish-speaking countries have modeled educational radio programs after the Colombian prototype.

OF NOTE:

- In rural Colombia, *El Campesino's* circulation (approximately 70,000) is greater than that of any other newspaper.
- *El Campesino* regularly features special pull-out supplements on family planning and education. These pull-outs can be hung as posters or folded up into booklets.
- Simple *Campesino* Library books for the newly literate cost the farmers about 13 U.S. cents each. Since 1963, well over a million titles — the most popular of which is called *Mother and Child* — have found their way into rural homes.
- The 20-member staff of ACPO's correspondence service answers roughly 200 letters a day. This service provides radio listeners with opportunities to ask questions about the broadcasts and to practice their literacy skills. It also supplies those who run ACPO with invaluable feedback.
- ACPO supports itself by sharing its radio station, recording studio, and printing plant with commercial interests.

REFERENCES:

"Family Planning Education in Action: Some Community-Centered Approaches," Judy El-Bushra and Susan Perl, International Extension College and International Planned Parenthood Federation, London, England, March 1976.

"Comunicación, Educación No Formal y Desarrollo Nacional: Las Radio Escuelas Colombianas," Juan Braun, *Educación Fundamental Integral*, No. 1, Bogotá, Colombia, August 1976.

Clearinghouse on Development Communication
June 1977

RADIO BAHAI'

Ecuador

- TARGET AUDIENCE:** Rural Indians in the two major valleys surrounding Otavalo, Ecuador
- OBJECTIVE:** To preserve the indigenous culture; to promote education; and to serve as a voice for the community
- MEDIA:** Radio, interpersonal communication, tape recorders
- DONORS/SPONSORS:** Self-supporting. (A matching-funds grant was received from CIDA, the Canadian International Development Agency, in 1981, for a two-year study on the development of agricultural and cultural programming.)
- DURATION:** 1977 - ongoing
- CONTACTS:** Marcelo Quinteros, Executive Director, Radio Baha'i, Apartado 14, Otavalo, Ecuador; Kurt Hein, c/o Kenya Institute of Education, Radio Language Arts Project, P.O. Box 30231, Nairobi, Kenya

DESCRIPTION:

Radio Baha'i was begun in 1977, in Otavalo, Ecuador, an Andean town of approximately 10,000, to serve the interests, needs, and tastes of the community in which it is located (selected for its high number of Baha'is). The station's primary audience are rural Indians in the two major valleys surrounding Otavalo. The Otavalo Indians' traditional life is increasingly being eroded by the incursion of 20th century technology and values and by population loss as villagers leave for jobs in the urban centers. The cultural values of some 100,000 campesinos, indigenous peasants whose principal activity is subsistence farming, are under attack from media and products from the urban centers. Recognizing these factors, the Baha'is built the station with three objectives in mind: 1) to promote and maintain the value, dignity, and significance of the people and their traditional culture; 2) to promote education, the delivery of social services, and the dissemination of basic development information; and 3) to serve as a voice for the community, enabling villagers within a 50-mile radius to exchange information, make announcements, and share news about important activities and events in the region.

While most stations in Ecuador broadcast exclusively in Spanish, Radio Baha'i broadcasts predominantly in Quichua, the home language. The majority of the staff, which is recruited locally, is illiterate, and none of the members had prior training in broadcasting. Nonetheless, all staff members have been trained to create, produce, and edit their own programs. Each staff member knows how to operate all the studio equipment, including tape recorders, turntables, microphones, and mixing consoles. Radio Baha'i places priority on program content over sophisticated broadcast technology to reflect the values and the tastes of the people for whom programs are intended.

Because the station's purpose is to serve the needs and interests of the rural farmers, news stories, such as those provided by the wire services, are avoided. Instead, the station has initiated a twice-daily news broadcast, "El Noticiero Local" (The Local News), designed to enable villagers to communicate important local events to one another. As most of the villages are without electricity and are accessible only by footpath, communication between them is virtually impossible. Therefore, a typical "Local News" program will include stories about lost children, lost identification papers, lost livestock, community dances, and mingas, community work parties. These announcements are broadcast free of charge in both Quichua and Spanish, and make the Local News one of the region's most popular radio programs. In addition to serving many of the communication needs of its audience, the news program is also an effective vehicle for the dissemination of development-oriented messages, especially for short-term campaigns.

Another program, a daily 30-minute long broadcast, is entitled "Tarpucpac Yuyay" (roughly, The Thought/Knowledge/Opinion of the Farmer). This program was developed following research done in 1980 which indicated a disparity between information and services offered by government agencies such as the Ministry of Agriculture and Livestock and the farmers' knowledge about and utilization of these services. Radio Baha'i staff discovered that the farmers seldom listened to Ministry announcements broadcast on the government station, did not understand them, and were unable to act upon the information provided in them. Radio Baha'i solved these problems by serving as an intermediary between the Ministry and the farmers. The station's production team visits villages throughout the region and uses portable tape recorders to record the farmers' needs and concerns. Once the farmers' major concerns have been identified, the staff then visit local Ministry offices and interview experts about the issues raised by the farmers. Segments recorded on the farms and at the Ministry offices are combined with scripted materials and music into the "Tarpucpac Yuyay" program.

RESULTS:

In one recent year, more than 2,000 messages were delivered to the station (most of them by individuals who spent half a day or more walking to the station), representing virtually every community within the station's 50-mile (80 km.) broadcast reach.

During an outbreak of hoof-and-mouth disease, the Ministry of Agriculture and Livestock asked Radio Baha'i to produce a spot announcing to farmers the nature of the disease and the availability of vaccine. After two weeks, more than 250 head of cattle had been treated, compared to seven during the month prior to the news feature. In another instance, doctors from a rural health center requested promotion of their free eye care. Shortly after the spot began to be aired, they requested that the spot be terminated because more than 450 people had come to the clinic the day after the first announcement, more than the clinic could accommodate. These are only two examples of Radio Baha'i's widespread success in serving the needs and interests of its audience.

A recent survey indicated that 94 percent of the potential audience listens to Radio Baha'i, an impressive showing given the fact that more than 30 stations can be heard in Otavalo.

OF NOTE:

- The Baha'i faith, based on the teachings of the 19th century prophet, Baha'u'llah, promotes the oneness of mankind, the elimination of prejudice, and the common foundation of all religions.
- Each staff member makes regular visits to the countryside to evaluate the programming, often spending several days in the community to establish a good relationship with the audience, and to gather information about listeners' needs and preferences.
- Radio Baha'i sponsors two of Ecuador's largest celebrations of indigenous culture. "Nucanchic Tono" (Our Music), an annual music festival attended by several thousand campesinos, has inspired a resurgence of traditional music. "Huahuamantag Huahuapag" (Of the Children, For the Children) is an annual festival in which rural schoolchildren perform traditional songs, dances, poetry, and drama. Both festivals are broadcast by Radio Baha'i and the winners perform on national television.

REFERENCES:

"Community Radio Thriving in Ecuador: Otavalo Indians Running Their Own Show," by Kurt Hein. Development Communication Report No. 40, December 1982.

"Community Radio in Ecuador Meeting Peoples' Needs," by Kurt Hein. Development Communication Report No. 42, June 1983.

RADIO MENSAJE Ecuador

TARGET AUDIENCE:	Rural Ecuadorian adults
OBJECTIVE:	To teach illiterate rural adults with educational radio programming devised by and for their peers
MEDIA:	Radio and cassette recorders
DONOR/SPONSOR:	University of Massachusetts Nonformal Education Project with funds from the United States Agency for International Development
DURATION:	Ongoing (initiated in August of 1972)
CONTACT:	Padre Isaias Barriga, Director, Radio Mensaje, Tabacundo, Ecuador

DESCRIPTION:

Campesino-produced cassette programs were introduced into the broadcasts of a small regional station, *Radio Mensaje*, in late 1972 as an attempt to reach a high proportion of the estimated 44,000 illiterate adults in the vicinity of Tabacundo, Ecuador. The project was designed to win over a mass audience through open broadcasting and to make the listeners themselves the programmers and the broadcasters. Its immediate objectives were to see whether radio programming without sophisticated formats, educated accents, etc., would still interest audiences, and at the same time to broadcast community-generated content in the vernacular. Its long-range goals were (1) to heighten the listeners' feelings of self-worth, (2) to further community development, and (3) to upgrade the listeners' literacy and numeracy skills.

With a modest equipment grant from the University of Massachusetts, the project secured 40 audio cassette recorders and many tapes. This equipment was then parcelled out and made familiar to the unpaid teaching assistants in the area's 40 radio school centers. Each *auxiliar* now uses this equipment to record tapes that are aired on two half-hour programs each week.

The *Mensaje Campesino* (*The Farmer's Message*) broadcasts reflect the idea that farmers are so interested in hearing themselves on the radio that home-made programming can attract a wide audience. While the *auxiliares* take charge of recording the tapes and of delivering them to the stations, the broadcasts are no longer even edited, much less put in a set format. The programs contain advice, poems, songs, scripture readings, dramatizations of community problems, testimonials, reading and math lessons (broadcast in conjunction with a pre-existing radio-education program), and exhortations.

RESULTS

A questionnaire administered in 1971, 1972 and again in 1973 showed that the number of *campesinos* content to rely solely on "the help of God" in community-development matters shrank from 80 to 50 percent in one year in the Tabacundo area. During the same time, the number interested in working for those willing to experiment with production practices rose from 56 to 84 percent. Still, the questionnaire did not reveal any significant increase in self-esteem among the farmers. Observers, however, contend that important attitude changes have indeed taken place. Padre Isaias Barriga, the station director, believes that using the recorders has shown the *campesinos* that the "power of the word" is at their disposal and that both the goals and the satisfactions of country life are unique and worthwhile.

Progress toward meeting the project's other two goals is relatively easy to measure and has been quite marked. Correct responses on a community development questionnaire increased from 50 to 61.5 percent from 1972 to 1973. In particular, the number who thought that erosion was a "bad thing" jumped from 26 to 58 percent of those questioned. Similarly, the number who scored "high" (about 55) on a language and math test given yearly between 1971 and 1973 increased dramatically. Overall drop-out rates rose from 26 percent during the 1971-1972 school year to 45 percent during the next, but this problem probably reflects external factors (crop failures and subsequent migration in search of work — the latter facilitated by a new highway that cut "commuting time" to Quito in half).

OF NOTE:

- Left on their own after receiving half-hour briefings on how to operate the tape-recorders, the *auxiliares* quickly came to terms with the equipment and used it carefully and creatively.
- One participating rural group without its own tape recorder rented a car to take it to the radio station's studio so its members could give a "live performance."
- The highly technical remarks of one well-intending but out-of-touch agronomist were "translated" by a *campesino* into an easily comprehended style.
- One community taped the speech of a development-program official and kept the tape as a lasting record of his promises to the people.

REFERENCES:

- "Programming by the People: An Ecuadorian Radio Experiment," James Hoxeng, *Educational Broadcasting International*, Vol. 10, No. 1, March 1977.
- "Tabacundo: Battery-Powered Dialog," James Hoxeng, Valerie Ickis, and Alberto Ochoa, *Technical Notes on Nonformal Education*, Center for International Education, University of Massachusetts, Amherst, Massachusetts, 1976.

Clearinghouse on Development Communication
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ASSOCIATION OF RADIO CLUBS OF NIGER

Niger

TARGET AUDIENCE:	Adult Nigeriens, especially those living outside the city
OBJECTIVES:	First, to provide information and advice in local languages to rural Nigeriens on matters related to their daily needs and to the improvement of their living conditions; second, to publicly broadcast farmers' opinions and statements on discussion topics
MEDIA:	Radio, tape recorders, print, and interpersonal communication
DONORS/SPONSORS:	Radio Broadcasting Service of Niger, the Nigerien Planning Ministry, Radio Niger, Nigerien Commission for Youth Activities, Nigerien Commission for Mass Information, and the French Government
DURATION:	Founded in June 1962; ongoing
CONTACTS:	Boubacar Danrani, Responsable de l'ARC�N, B.P. 605 Niamey, Niger; Stephen Grant, Service d'Evaluation, B.P. 4717, Abidjan, Ivory Coast; Robert Lefranc, Director, Centre audio-visuel, Ecole Normale Superieure, Saint-Cloud, France

DESCRIPTION:

The Association of Radio Clubs of Niger (ARC�N) was established in June 1962 under the auspices of the Radio Broadcasting Service, Radio Niger, and government officials. Its founders' goals were to promote democratic practices in Nigerien villages, to identify and train village leaders, and to set up reception centers. Underlying these objectives was the desire to provide villagers with the means to customize local programming, ridding it of its alien urban stamp, and to make heavy use of village feedback in centrally produced programming.

Radio was a natural choice as the medium to mine public opinion and to broadcast educational and civic programs because the oral tradition has long prevailed in Niger. The power accorded the spoken word has also forced the ARC�N project staff members to devote scrupulous care to the formation and translation of messages and programs. The producers in Niamey prepare radio-programs in three languages: Haoussa, Djerma, and Tamachec. The programs can be classified according to three types: lectures on topics of general interest to all Nigeriens, talks on subjects of regional interest, and taped free-form discussions by participants of issues covered in either of the first two categories of programs. Topics of general interest range from agricultural credit and environmental protection to the function of parent-teacher associations. Regionally broadcast programs include discussions of various Nigerien cities and their problems.

Listening clubs were originally formed by village volunteers supervised by the central office staff (composed at present of a coordinator, one producer and two assistant producers, one writer, a maintenance technician, two secretaries, and a chauffeur). Gradually, the need to pay these organizers became clear, and now animators — most of whom are civil servants, teachers, male nurses, and agricultural advisers under 35 years of age — are recruited selectively and given a three-week training course on national development goals, media equipment use, data collecting, and group dynamics. Animators, who are paid both a flat fee and an increment based on productivity, are responsible for taping interviews with both the participants and resource persons, leading the weekly post-broadcast discussions, and collecting feedback from the participants. They receive support from Niamey in the form of mimeographed discussions of the upcoming program topics, instructions for handling discussion, lists of sample discussion questions, and standard forms for use in program evaluation.

The number of listening clubs formed to consider and create programs has fluctuated, averaging more than forty in the project's first years, peaking at seventy, and holding steady at about thirty in 1978. ARC�N officials are apparently unconcerned about the decline, however, preferring quality to quantity in a program intended to remain experimental.

RESULTS:

No evaluation of the *Association of Radio Clubs of Niger* has been conducted for more than a decade, and no quantitative evaluation of learning gains or awareness levels has ever been attempted. A report published in the early years of the program's operation contained claims that the listening clubs and the broadcasts had had far-reaching effects in terms of identifying local leaders, creating a psychological climate favorable to national development efforts, and stimulating community works projects and other social advances. Little concrete evidence supports such claims, however, so the project's success can only be measured in terms of *ARCN's* longevity (at 15 years, something of a record among development-communication projects) and its enrollment (estimates of which vary).

OF NOTE:

- The rate of return of feedback forms by the animators is reportedly 100 percent.
- Programs in Tamachec, the language of many Nigerien nomads, are broadcast only in the summer months, when the desert dwellers drive their livestock to the salt licks. Transistor radios, as well as salt blocks, are part of the camel-carried baggage of the migratory tribes.
- "Start from the standpoint of life as it now is, explain it — and transform it," is the stated philosophy of *ARCN's* promoters and programmers.
- Surveys, radio transmissions, and discussions cover only simple and concrete subjects.
- Nominal fees are collected from the *ARCN* club members, but most participants do not officially register, and revenues from participants amount to only a fraction of the sum provided annually in government appropriations and subsidies.
- Among measures taken to keep newly trained instructors from becoming intellectually isolated are systematically reviewing their work, circulating a journal containing relevant pedagogical texts, and conducting written exams to identify and reward high achievers.
- Care has been exercised to make sure that government officials, some of whom objected to *ARCN* at its outset on grounds that it was unnecessary or counterproductive, see *ARCN* as complementing and supplementing their work.
- Radio Programs, which are broadcast first on Monday night and repeated on Thursday at the same time, are always revised before they are re-broadcast. Many are run during one week only.

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- "A Recent Look at Niger's Radio Clubs," Stephen Grant, Abidjan, Ivory Coast, unpublished paper, 1978.
- "Radio Clubs in Niger," Robert Lefranc, in *New Educational Media in Action: Case Studies For Planners*, Vol. III, UNESCO, 1967.
- "Radio-Clubs du Niger: Twenty Questions, Twenty Answers," Mimeograph, *ARCN*, undated.

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COTABATO NGAYON

Philippines

TARGET AUDIENCE: Population of Cotabato City and the western Mindanao region

OBJECTIVE: To keep the people informed of local, national, and world events; provide listeners with a public announcement service; and promote development projects

MEDIA: Radio, interpersonal communication

DONORS/SPONSORS: None (project was self-supporting)

DURATION: 1966 - ongoing

CONTACT: Mr. Simeon Bonzon, Foreign News Editor, Bureau of National and Foreign Information, Ministry of Public Information, Manila, Philippines

DESCRIPTION:

When the Oblate Missionary Fathers came to Cotabato on Mindanao in the Philippines in 1939, they launched an ambitious social program which included establishing two major schools, a housing program, the weekly newspaper MINDANAO CROSS (now the largest regional weekly) and, in 1958, two radio stations, DXMS and DXND.

Broadcasting at 10kw to Cotabato and the western Mindanao region, Radio DXMS captures the largest audiences during most time slots. Although DXMS is a privately owned church-oriented station, it accepts revenue for commercial advertising. Programming has followed the general format of commercial stations, except for the increased proportion of informational public service and other development programs.

When Neps Dimacutac, producer/announcer of the magazine program, died suddenly in 1966, the DXMS staff decided to replace the original program with Cotabato Ngayon (Today Now), whose format would be more flexible, informative, and public-service oriented. The time-slot was 7:15 to 8:00 in the morning, immediately after the national and world news round-up--the peak listening time. The objectives of the new program were: to keep the people informed of local, national, and world events, especially those affecting the local community; to provide public service announcements; to provide on-location reporting of important events; to reflect people's views through field reports; and to support development projects through the use of the mobile facilities of the station.

The production unit is composed of two reporter-producers (one of whom doubles as driver and technician), one studio announcer, and one continuity/master control technician. None of them are trained formally but learn on the job. Consequently, the team is extremely versatile; almost anyone can do another's job, except for the master control. Field production facilities use a jeep, renovated and fitted with a two-way VHF radio and a portable tape recorder. For studio production and airing, the team uses the mixing console at the master studio which has 2 turntables, 3 tape-recorders, 1 recorder, 2 semi-professional recorders, 1 cassette deck, and a telephone patch.

Although Cotabato Ngayon is not a formal news program, the sources used include monitored radio news programs from Manila, local and national newspapers, bulletins from the various mayors and provincial governments, and phone calls from various agencies, offices, and institutions. In small towns it is common for people to report events or ask for public service announcements from the local radio station. These announcements include reports of landslides and delayed buses; lost and strayed farm animals; deceased relatives (tradition requires that family members, regardless of where they are, come and console the bereaved family); and arrival of relatives in a distant town. In a territory where telegrams are expensive and telephones non-existent, radio is the poor man's telephone and telegraph.

The program basically consists of a talk format using as many sources as possible—mobile reports, phone calls, taped current events, studio reports, and discussions. When major events take place outside the air time, they are recorded and edited for insertion in the morning program. When two or more events take place during the morning slot, the mobile unit covers one event while a separate team covers the other with the portable tape recorder. The current events reports are phoned in live during the broadcast or edited for insertion during the program.

Locations where news can be obtained by the mobile unit include the airport and bus terminals. Bus rides to various towns and provinces are also a good news source. A chat with the bus driver or conductor usually reveals road and weather conditions, and news from other towns. The frequent stops provide opportunities to interview both passengers and people from the vicinity. Reporters can get a good summary of changing prices from town to town, shortages of food items, the effects of drought or heavy rains on the expected crop output. Urgent news can be phoned in from the next town having a telephone, other interviews are edited upon return for incorporation as segments in the next day's program.

RESULTS:

Cotabato Ngayon has assisted other DXMS development programs. In 1967, DXMS aired a "Farmers' School of the Air," which sponsored the launching of a communal irrigation system to be established in Tacurong, a town several hundred kilometers from Cotabato City. As a result of the coverage, the whole town showed up, tools in hand, to dig the irrigation canals. Consequently, the canals were completed ahead of schedule.

Due to lack of available funds, there has been no formal evaluation of Cotabato Ngayon or any other DXMS programs. The station does receive regular ratings from commercial surveys, but these are mainly to inform advertisers of popular programs and stations for their publicity outlets. However, the program format provides its own feedback. Through telephone calls, letters, interviews, and mobile reports, the production unit is constantly in touch with one or more segments of the audience.

The flexible format remains the key asset of Cotabato Ngayon. It can adapt to meet almost any development need: providing information, instructing in farming techniques, supporting development projects, focusing on issues, assisting in disasters, and keeping people in contact with each other.

OF NOTE:

- Mindanao is one of the three largest of the 7,000 islands which form the Philippines. However, although more than half the country's agricultural exports are produced there, Mindanao lags behind the two other regions in modernization.
- Since the audience is a diverse one, the production unit has to be constantly aware of the dozen or more ethnic and language groups of the listeners. Most of the staff announcers are multi-lingual.
- The regional weekly newspaper, MINDANAO CROSS, provides a one-eighth page free advertisement for the program and often writes up the radio interviews as news articles.
- Cotabato Ngayon seeks to supplement the MINDANAO CROSS, which appears weekly only, by providing solid, positive, development information during the intervening six days.

REFERENCES:

"Cotabato Now," by Simeon Bonzon in Rural Radio: Program Formats. UNESCO Monographs on Communication Technology and Utilization. UNESCO. Paris, France, 1979.

Clearinghouse on Development Communication
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(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profile, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

PROJECT FOR EQUALITY OF ACCESS TO EDUCATION FOR WOMEN AND YOUNG GIRLS Upper Volta

TARGET AUDIENCE:	Rural women and girls in three regions of Upper Volta
OBJECTIVES:	To provide practical education as a means of improving living standards and the status of women in the community; to train teachers to perpetuate the movement
MEDIA:	Radio, films, slides, dramatizations, printed materials, interpersonal communication
DONORS/SPONSORS:	The Government of Upper Volta (the Ministry of Education and Culture, and other agencies in Upper Volta's 11 Organizations for Rural Development); UNESCO; UNDP; ILO; FAO; and other international, governmental, and non governmental agencies
DURATION:	Planned and initiated in 1967; ongoing through at least 1981
CONTACTS:	Madame Scholastique Kompaore, Project Manager, Project d'Égalité d'Accès des Femmes et des Jeunes Filles à l'Éducation, B.P. 111, Ouagadougou, Upper Volta; Mary Lynn Hanley, Information Officer, UNDP, One United Nations Plaza, New York, New York, U.S.A.; Brenda McSweeney, UNDP, B.P. 575, Ouagadougou, Upper Volta

DESCRIPTION:

The Government of Upper Volta and UNESCO together implemented the *Project for Equality of Access to Education for Women and Young Girls* in 1967 to improve living standards in 83 villages and to increase the community status of females. To lay foundations for such broad reform, the project staff adopted clearly defined intermediate goals. It conducted sociological studies to identify the obstacles to women's access to education, launched literacy campaigns for rural women, instituted both training programs for community educators and feminine-leadership programs, and sponsored basic educational courses in nutrition, agriculture, home economics, health, and the establishment of micro-industries and craft cooperatives.

A pre-project needs assessment was conducted nationwide in 1967. Kongoussi, Banfora, and Pô — three regions with different ethnic and linguistic constituents and different economic conditions — were then selected as pilot sites. Since Voltaic women, busy from before sun-up to after sun-down, had no time to spare for educational activities, the first phase of the project became the introduction of labor-saving devices: wells, milling appliances, carts, and maternity clinics. At the same time, life-saving devices — education programs in hygiene, nutrition, and health — aimed at relieving women's psychological and physical burdens were introduced.

Since the three pilot projects were not started simultaneously, the point at which time and health constraints had been reduced enough to allow villagers to participate in literacy and vocational training varied (from roughly 1970 to 1975). However, radios had been distributed and listening groups had formed early in the project, and both figured centrally in the agriculture and village-improvement campaigns. Thus, radio forums became one of the two major modes of instruction. (In-school programs, the other major mode, were designed primarily for girls).

As a rule, programs are prepared weekly in local languages. They include debates on the successes and problems affecting project activities and other concerns of the village women, and they incorporate both the views of village women and songs composed by local musicians about project activities. During training, the village female leaders enact theater sketches and the village women take part in cultural performances that represent a continuation of village plays — the traditional vehicle throughout Africa of social comment, social control, and area news. In addition, movies and slide shows prepared and shown locally are followed by discussions. This inter-village, inter-regional, and rural-urban exchange is further strengthened by the distribution of vernacular newspapers.

RESULTS:

An evaluation of the Access project, conducted in 1974 by a commission composed of representatives from the Upper Voltaic Government, UNDP, and UNESCO, identified poor transportation, poor communication facilities, a lack of production and distribution facilities for the materials needed in the literacy programs, and a shortage of trainers for literacy and community development programs as the chief obstacles to realizing the project's goals. At the same time, the committee advanced the idea that literacy programs must address men as well as women if they are to succeed, since illiterate men are not apt to encourage their wives and daughters to seize opportunities that they themselves do not enjoy. The most intractable problem has been the paucity of employment possibilities for women who manage to acquire literacy and vocational skills. According to one UNESCO report, training has in many instances proved inappropriate, and employers continue to discriminate against women.

The activities undertaken since 1967 are the subject of an evaluation currently under way; particular attention is being paid to the impact of technologies upon the women's use of time and their productivity. Statistics released in 1976 show that 109,042 villagers had been involved in the project in ten years, approximately 100 midwives had been trained, 427 latrines had been built in conjunction with the sanitation component, 85 listening groups had been formed, and 42 "monatrices" (female village-extension workers) had established residence in 42 villages.

At present the project is being expanded to cover the whole nation. Its activities will be implemented by the Ministry of National Education and Culture with the collaboration of the Ministries of Rural Development, Health and Social Affairs, Environmental Affairs, and Labor.

OF NOTE:

- In the early years of the project, teachers were selected from the ranks of qualified primary and secondary-school instructors. Later, some won fellowships abroad to study nonformal education techniques.
- Female village-extension workers residing in the villages serve as liaisons between the regional teams and the female village leaders (midwives and others).
- The radios and milling machines supplied in conjunction with the project were plagued by mechanical difficulties. Consequently, the project incorporated an appropriate technology unit to carry out research and experiments aimed at helping the women do their chores more efficiently and quickly.
- Upper Volta is one of the world's least economically developed countries, and its population is 95 percent rural.
- A national coordinating team working closely with three regional teams formulates, programs, and coordinates project activities at the national level.
- While the status of Voltaic women is generally beneath that of men, regional differences in female status forced project organizers and curriculum designers to tailor literacy materials and activities to the specific needs of each local group.

REFERENCES:

- "Project Experimental: Égalité d'Accès des Femmes et des Jeunes Filles à l'Éducation," report of the Upper Volta National Commission for UNESCO, Ouagadougou, May 1974.
- "A New Chance for Rural Women," Mary Lynn Hanley, *Action UNDP*, January-February 1975.
- "Le Projet d'Égalité d'Accès des Femmes et Jeunes Filles à l'Éducation: 1967-1976," Ministry of National Education and Culture, Ouagadougou, November 1976.

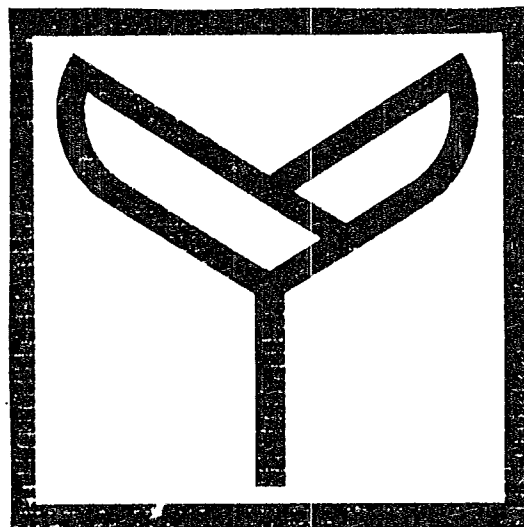
Clearinghouse on Development Communication
January 1978

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SELECTED
**PROJECT
PROFILES**

CASE HISTORIES OF COMMUNICATIONS IN THE SERVICE OF DEVELOPMENT

AGRICULTURAL COMMUNICATIONS



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ASSISTANCE TO RURAL BROADCASTING Afghanistan

TARGET AUDIENCE:	Farmers in the Afghan provinces of Wardak, Logar, Kunduz, and Herat (approximately 17,500 people)
OBJECTIVES:	To improve rural broadcasting as a means of supporting rural development activities and to test the feasibility of establishing in Afghanistan a communication system involving radio, cassettes, and farmers' feedback
MEDIA:	Radio, tape recorders and cassettes, and interpersonal communication
DONORS/SPONSORS:	Food and Agriculture Organization of the United Nations; Afghanistan's Ministries of Agriculture and Education; Australia's FFH/AD; and Radio Afghanistan
DURATION:	Initiated in 1973; implemented in 1976; Phase I terminated in 1977; Phase II pending
CONTACTS:	Trevor L. Stockley, Rural Broadcasting Specialist, Ministry of Agriculture, Kabul, Afghanistan; Abdullah Naik, General President of the Extension Department, Ministry of Agriculture, Kabul, Afghanistan; S.Y. Wasiq, Director, Radio Afghanistan, Kabul, Afghanistan; and Fazel Rahim, Deputy Minister for Agriculture, Kabul, Afghanistan

DESCRIPTION:

The Assistance to Rural Broadcasting Project took shape in 1973 following meetings in Afghanistan of government officials with the Chief of FAO's Development Support Communications Branch. The project was designed to reflect the Afghan Government's desire to keep farmers apprised of improvements in agriculture and livestock-production techniques and to make them aware of the existence and availability of credit, equitable means of distributing irrigation water, and the possibility of forming farmers' cooperatives. By the time the political and logistical obstacles to implementation had dissolved, 1976, the project had acquired a second dimension — that of a communication support system for the national land reform then in progress.

Abandoning early plans to establish and then to test the feasibility of a rural radio forum in Afghanistan, the project directors decided that a communication system involving radio, cassettes, and farmers' feedback would meet local needs better than the conventional radio forum could. Accordingly, tape recorders and one hundred tapes were purchased, and a survey aimed at determining the kinds of information that farmers wanted and could use (and that project employees could provide) was carried out. In December 1976, tapes produced on the basis of the survey findings were circulated in two provinces.

The radio component of the communication system was already well-established in the project area when the project began. Radio ownership in rural Afghanistan is high and the Ministry of Agriculture's Department of Extension and Development has been contributing twenty minutes of programming to the nightly broadcast of "Village, Home and Agriculture." However, members of the production corps and listeners alike were far from satisfied with the quality and content of the broadcasts. To upgrade program effectiveness, then, a foreign consultant was brought into the Radio Unit of the General Directorate of Information and Publishing of the Department of Extension and Development to provide in-service training for one year to the seven full-time staff members. At the same time, additional recording equipment was bought and a staff vehicle was secured for use in making field trips and collecting farmers' feedback.

Fifty-six extension agents from eight extension units were selected to participate in the project. After being briefed and receiving radios, these agents conducted the sixteen meetings that served as the pre-project survey and visited villages on Wednesdays (when "Village, Home and Agriculture" was broadcast) to drum up interest in the radio broadcasts, to distribute cassettes (in Wardak and Logar only), and to solicit farmers' requests, criticisms, questions, and comments.

Reflecting both the strengths and difficulties encountered by staff members in this project, tentative plans for extension of the project beyond the pilot phase specify that the combination of radio, cassette recorder, and extension agent be retained, that a full-time technician/maintenance person be hired, that Radio Unit personnel be well-versed in either agriculture or extension work, that a filmstrip component be added to the media mix, and that more study be devoted in the future to measuring the rate at which farmers adopt improved practices.

RESULTS:

Records kept by the extension agents show that 3,883 of the roughly 17,500 farmers in the target area had heard at least one tape — a finding confirmed by an extrapolation of the figure (22.5 percent) reached in the evaluation survey. In contrast, two out of every three farmers in the area had heard programs on the national land reform, and four out of five of those who heard the message felt that all their questions had been answered satisfactorily.

In addition to exposure to the medium and the message, increases in knowledge, the correlation of contacts (with tapes and extension agents) with radio-listening habits, the relationship between the specificity of the message and the likelihood that the hearers will act upon it, the relationship between the tendency to provide feedback and the tendency to take action based on newly acquired information, and the relationship between the timeliness of the message and the adoption of advice were all studied.

Not surprisingly, the spread of ideas proved easier to trace than the spread of improved agricultural practices. Moreover, little effort was made to measure changes in farming techniques since the project resources were limited. Research did, however, establish that farmers in the experiment acquired information that they considered useful, tended to value cassette-carried (as opposed to that passed from farmer to farmer) information more as they grew accustomed to the medium, and contended more or less unanimously that "Village, Home & Agriculture" had improved markedly during the year of the experiment. The evaluation survey also showed that half the farmers who had heard the tapes listened regularly to the radio broadcast, compared with three in ten of those who had not heard the tapes. As for the hypothesis that the more tailored a particular recommended technique is to local needs the more likely it is to be tried, it held good for only three of the five variables tested.

OF NOTE:

- The pre-broadcast survey revealed that farmers tended to be interested in topics that are seasonal, local, and related to decisions they have to make. Specifically, the cassettes carried information on the control of rye grass in wheat, of rust and smut in wheat, on the pruning of fruit trees, and on the control of field mice.
- Field trips related to the project were far more than whirlwind tours. Some lasted as long as 25 days.
- Post-project research indicated that receptivity to the broadcast and taped messages had nothing to do with a farmer's age and that level of education correlated with willingness to try a new practice with respect to only one of the five variables measured.
- The FAO-employed consultants who conducted the in-service training for members of the Radio Unit developed a training manual, "Notes on Communicating Through Radio," and a glossary of technical terms.
- Wardak and Logar were selected as sites for the cassette experiment because agriculture extension programs in both were already active, farmers and village leaders were prepared to participate in the project, local authorities promised to cooperate, other development projects were under way, control groups could be identified for experimental purposes, and roads were good enough to permit year-round access by a vehicle with four-wheel drive.

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- "Assistance to Rural Broadcasting — Afghanistan, Terminal Report", TF.AF6.10(FH), Trevor L. Stockley, Food and Agriculture Organization of the United Nations, Rome, July 1977.
- "Development Communication in the Provinces of Wardak, Logar, Kunduz and Herat," Draft, F.A.O., Rome, October 1977.

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(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

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FARM BROADCASTING RADIO

Bangladesh

TARGET AUDIENCE: The rural population of Bangladesh

OBJECTIVE: To improve agricultural productivity and increase output in Bangladesh by providing information on modern agricultural techniques, marketing possibilities, livestock management, and other development programs

MEDIA: Radio, interpersonal communication

DONOR/SPONSOR: The Government of Bangladesh

DURATION: 1973 - ongoing

CONTACT: S. A. Shahadat, Director, Farm Broadcasting, Radio Bangladesh, House No. 33, Road No. 2, Dhanmondi R/A, Dacca 5, Bangladesh

DESCRIPTION:

Farm broadcasting by Radio Bangladesh began in November 1973, almost two years after the emergence of Bangladesh as an independent country. It was initially aimed at rebuilding the agro-economy which had suffered greatly during the 1971 war, and modernizing agricultural production. In the words of S.A. Shahadat, the Director of Farm Broadcasting, Radio Bangladesh, "The fact that radio is the principal medium of mass communication in Bangladesh warrants its optimum use for development purposes." Entitled "Desh Amar Mati Amar" (My Country, My Land), the program is transmitted daily for 30 minutes from Radio Bangladesh, Dacca, on its national hook-up. It is simultaneously relayed by five other regional stations of Radio Bangladesh: Chittagong, Rajshahi, Khulna, Rargpur, and Sylhet.

In Bangladesh, where the literacy rate is low, radio can play a vital role in educating and motivating people to meet national aims. For this reason, in addition to the national hook-up of farm broadcasts, Radio Bangladesh has begun broadcasting regional 20-minute programs from the six regional stations. These programs cover cooperative farming, self-reliance, daily market rates, information on regional crops, day-to-day agricultural operations, folk women's programs, and listeners' group programs.

Listeners are taught that by developing skills and improving their agricultural methods, not only will they attain a level of self-sufficiency; they will surpass it. For example, in the fish industry, once self-sufficiency in the fisheries has been achieved, the country is able to export fish, thus adding to the foreign exchange. Farm broadcast programs do not merely encourage people to cultivate fish for individual consumption, but attempt to motivate them to cultivate fish as a source of income.

A program entitled "Tarun Taranga" (Youth Wave) is also included in the regional farm broadcast transmissions, aimed at creating an interest among the young people and inspiring them to participate in the agricultural development program. Since malnutrition is considered to be a national problem, a program on nutrition is broadcast every two weeks. In addition, programs on cooperative farming and farm bulletins from the Dacca, Chittagong, and Rampur stations are aired early in the morning to remind farmers of the day's agricultural operations.

RESULTS:

In order to obtain organized feedback from the target audience, radio clubs for farmers have been formed in each area of the regional stations. In addition, a one-band transistor radio has been distributed to each of the clubs to enable its members to listen to the farm broadcast programs and provide the radio stations with feedback. The number of clubs is limited, however.

To date, the impact of farm broadcasting programs has been assessed primarily through listeners' letters and occasional feedback from farmers' clubs. However, Radio Bangladesh requested the National Broadcasting Academy in Dacca to undertake a study on the evaluation and impact of the farm broadcast programs, the results of which will be released this year. The evaluation entails a study of six districts, each of which is reached by one of the six regional stations in Bangladesh. The study will determine the characteristics of the target audience, their interests and problems, their listening habits, and their reactions to some of the radio programs. Radio Bangladesh expects that the results of this study will enable it to improve the farm broadcasts and further meet the needs of its audience.

The farm broadcast programs of Radio Bangladesh have contributed significantly to informing and motivating farmers in the use of modern agricultural practices.

OF NOTE:

- o Nearly 50 percent of the total population of Bangladesh are women, most of whom live in villages and constitute a strong agricultural work force. Since many of the women are illiterate, Radio Bangladesh schedules programs to educate them on better and more productive living. A 10-minute period is reserved for women in the regional farm broadcasts, and an attempt is made to create a sense of awareness among them.
- o When scheduling the regional farm broadcasting programs, particular attention is given to the needs of the farmers. Programs by extension workers, which are based on farmer feedback, are given priority in the schedules.
- o Farm broadcasting programs are not confined to the studios. Microphones are taken into the fields to record farmers' achievements as well as their problems.

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"Farm Broadcasting in Radio Bangladesh," by S. A. Shahadat, Director, Farm Broadcasting Radio Bangladesh. Combroad, December 1982.

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LEFATSHE LA RONA — OUR LAND

Botswana

TARGET AUDIENCE:	The adult population of Botswana
OBJECTIVES:	To involve the public (particularly its rural constituents) in learning about and commenting on land-use policies
MEDIA:	Radio, print, flipcharts, and interpersonal communication
DONORS/SPONSORS:	Botswana's Ministry of Local Government and Lands and other national governmental agencies, with financial assistance from the British Government
DURATION:	Begun in 1975; carried out primarily in 1976; follow-up stage completed in 1977
CONTACTS:	Mr. B.K. Temane and Mr. D. Noppen, Ministry of Local Government and Lands, Private Bag 006, Gaborone, Botswana; Ross Kidd and Alan Etherington, Department of Adult Education, OISE, 252 Bloor Street West, Toronto, M5R 1B2, Canada; and David Crowley, National Youth Bureau, 17/23 Albion Street, Leicester, LE1 66D England

DESCRIPTION:

LEFATSHE LA RONA — Our Land, a project of Botswana's Ministry of Local Government and Lands, has been both an experiment in participatory decision-making and an attempt to solve a land-use problem at the heart of a semi-arid country's economy. Botswana's traditional tribal grazing system — a series of White Papers issued by the government between 1971 and 1975 revealed — could not long withstand pressures exerted by increases in human and livestock populations. Under excessive strain, the communal grazing areas adjacent to villages were plagued by soil erosion, and uncontrolled grazing near surface water was contributing to the deterioration of the veld. At the same time, policies governing well-drilling tended to work against smaller cattle owners (as opposed to wealthy individuals). By 1975, the national government had identified means of reversing land degradation. It had developed a land-management policy based on the practices of stock controls, fencing, paddocking, early weaning, salt-and-bonemeal feeding supplementation, and rotational grazing. But it was also determined to preserve some of the values and features of the traditional land-tenure system and to protect the interests of those who own few or no cattle. Accordingly, it launched an educational and consultative campaign to explain and to get feedback on land-zoning policies and other aspects of the land-management program.

The "Public Consultation" staged by the national government took place in four phases. The first consisted of a two-month national speaking tour in the autumn of 1975. The President and his ministers attended more than 100 *Kgotlas* (community meetings) during this period, explaining public policy and fielding questions from villagers. The second phase, July of 1975 to February of 1976, comprised briefings and seminars for government officers and others. The third phase, the Radio Learning Group Campaign, was trial-run in December of 1975 and conducted on a full scale in 1976. The final phase, the analysis and use of the public responses culled during the Radio Learning Groups, took place in 1976 and 1977.

The Radio Learning Group Campaign involved a pilot project, leadership courses (held in May of 1976), materials preparation (from October of 1975 to March of 1976), radio broadcasts (from June through July of 1976), and follow-up radio programs based on responses to the earlier broadcasts and aired from July to December of 1976. A limited amount of vital information on the land-zoning proposals and their implications for people in various parts of the country was broadcast during this campaign to roughly 3,200 listening groups averaging 16 members each. Every group had a discussion leader recruited and trained by extension workers (in agriculture, community development, and health) who functioned in extension teams. Each group met twice a week for five weeks to discuss the broadcasts and the specially prepared materials (flipcharts, an illustrated popular version of the White Paper on zoning policy, pictures, and study guides). After each program, the group leaders mailed a report on the group discussion to the campaign organizers, who used the information to work out land-use plans and prepare "answer" programs for broadcast.

RESULTS:

Original plans called for the organization of between 4,000 and 5,600 groups, while 3,510 were actually established. The attendance record was comparably positive, with one participant in five attending all meetings and each listening-group member attending an average of six. According to one estimate, one adult in six was reached directly by the campaign.

The desired outcome of *LEFATSHE LA RONA*, a national consensus on the need for new land-use policies and on the most effective ways for implementing such policies, appears to have been achieved. The Public Consultation (defined in the campaign as "government and people discussing together") revealed that the people of Botswana recognize the problem of overgrazing and see the presence of too many cattle as a major cause, that a large majority favored (though hesitantly) the principle of granting exclusive leasing rights to grazing land and also wanted such grazing land situated in the sand-velds where population density is low. About the formation of ranching groups, the people of Botswana are uncertain, though they acknowledge that this is a major mechanism by which a "small man" could benefit. Most RLG members opposed the setting of limits on the number of cattle that an individual farmer could hold. Most were also hesitant about adopting expensive, modern ranching methods but were interested in learning more about them and having access to the financing for them. These and other findings are being used by the national government and the regional Land Allocation Boards on an *ad hoc* basis in decision-making. They have not been used to form laws or nationwide policies, since conditions and listening-groups responses varied so much among Botswana's 11 districts.

OF NOTE:

- The main issues covered in the questionnaires used to gather feedback were grazing rights, zoning, the importance to present and future generations of caring for the land and respecting its limits, water rights, fencing, conservation in general, resettlement schemes, and the possibility of establishing farmer's groups.
- Radio was selected as the primary medium because almost four-fifths of the adult population of Botswana cannot read or write.
- Although the official national language, Setswana, was used for radio broadcasts, some adults intended to benefit from the radio programs don't speak Setswana. Other problems related to the translation of English-language materials into Setswana were also encountered.
- One observer of the interministerial media campaign has raised the possibility that the campaign was too intense, that "media overkill" came into play.
- Some members of the Radio Listening Groups were openly suspicious of the government's interest in their opinions. "Why, they asked," hasn't the government consulted us about other matters of public interest?"
- The cattle industry is the mainstay of Botswana's economy.
- Report forms returned to project headquarters were tabulated and analyzed by computer.

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- "Botswana's Radio Learning Group Campaign," David Crowley and Ross Kidd, International Extension College, England, 1976.
- Lefatshe La Rona Radio Learning Group Campaign of Botswana,*" Paul Hurly, abstracted in *Communications for Social Development in Africa*, edited by John Balcomb, UNICEF, Nairobi, 1977.

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SCHOOL-ON-THE-AIR India

TARGET AUDIENCE:	Indian farmers
OBJECTIVE:	To impart a systematic knowledge of agricultural science to farmer listeners via radio broadcasts
MEDIA:	Radio, supplemented by written correspondence
DONOR/SPONSOR:	All India Radio
DURATION:	Initiated in August 1975; ongoing
CONTACT:	Dr. Pradip K. Dey (Project Director), Farm Radio Officer, All India Radio, Calcutta, India

DESCRIPTION:

In 1975 All India Radio developed a strategy to deal with the complex problem of delivering, in a short period of time, modern farming information systematically through channels acceptable to the rural farming population of West Bengal. The radio station chose literate farmer listeners with access to radios as the target audience for a broadcast series on agricultural science information. Its staff assumed that if systematic knowledge of agriculture were imparted to the farmer listeners, they would become "contact farmers" and disseminate modern agricultural innovations to villagers hitherto incapable of interpreting, or without access to, complex information on modern agriculture.

The *School-on-the-Air* for farmers broadcast six courses between late 1975 and early 1976. Each course consisted of five half-hour lessons. The curriculum was planned with the help of the Agricultural Department of the State Government of West Bengal, which also selected the broadcast trainers or teachers.

Trainers prepared the lessons and read them over the radio every Sunday between 7:00 and 7:30 p.m. The delivery pace was slow so the farmer listeners could write down important points. Key points, as well as unit numbers and measures, were repeated several times throughout the broadcast. At the end of each program, questions were broadcast. Before the listeners mailed responses to these questions to the radio station, their requests for clarification on points broadcast during the program were answered. Trainers marked each paper, and at the end of the year the radio listener received a certificate of appreciation along with his grades.

RESULTS:

Although All India Radio feels that a large number of farmers may have benefitted from the broadcast programs, only 114 actively participated in the correspondence course during the first "school year." These trainee listeners were surveyed at the end of the training session to ascertain their interests and expectations, and their potential for becoming contact farmers. Most participants, the survey showed, were between the ages of 20 and 29, educated at the high school level, and of middle income status. About 53 percent were closely associated with cultivation, while 35 percent were students or teachers. Most reported listening to the lessons on their own radios, and most were prone to greater social participation after hearing the broadcasts.

Overall, participants generally took a total of three out of the six courses offered during the training session. Most listeners were interested primarily in courses on the cultivation of wheat and summer paddy, two widely cultivated and remunerative winter crops in West Bengal. They reported that their strongest motive for participating in the course was to learn more about scientific farming, but that the desire for realizing increased profits came second.

After the first-season responses were analyzed by members of the Department of Agriculture of West Bengal, the 1976-77 School-on-the-Air was altered to stress the most popular subjects, and broadcast times were changed. The 1976-77 courses subsequently drew a higher number of active participants (155-180, depending upon the course). According to the project director, the evaluation showed that the likeliest participants in future farmers' School-of-the-Air courses will be prospective farm leaders — potential contact farmers.

OF NOTE:

- To measure listeners' potential for becoming contact farmers, researchers compared the participants' socio-personal characteristics with those of potential farm leaders identified by past investigators.
- Studies do not confirm that feedback from listeners altered future broadcasts, nor that broadcast trainers directly asked radio listeners to reach out to disadvantaged farmers with the innovative broadcast information.
- While farmers originally listed making monetary gains as the second most important reason for listening to the radio broadcasts, a follow-up study showed that expectations for realizing such profits dropped during or after the course.

REFERENCES:

"Agricultural Broadcasting: A Novel Approach in Calcutta," Pradip K. Dey, *Combroad*, No. 34, January-March 1977.

"Identification of Participants of the School-on-the-Air for Farmers," *Indian Agriculture*, Vol. 20, No. 2, 1976.

Clearinghouse on Development Communication
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KIPSIGIS HOMESTEADS CATTLE-DIP MANAGEMENT PROGRAM

Kenya

TARGET AUDIENCE:	Maneret dairy farmers near Sotik and Kipsigis (about 200 in all)
OBJECTIVES:	To use small media to provide cattle-raisers with educational and motivational information related to a tick-eradication program
MEDIA:	Cassette tape recorders, posters, photoessays, photographs, film, print, and inter-personal communication
DONORS/SPONSORS:	U.S. Peace Corps; the Government of Kenya
DURATION:	Begun in 1970; ongoing
CONTACTS:	Bruce E. and Alisa K.A. Lundeen, Arusha Appropriate Technology Project, P.O. Box 768, Arusha, Tanzania; Joseph Kenyua, Cattle-Dip Supervisor, Sotik, Kenya

DESCRIPTION:

The U.S. Peace Corps began the *Kipsigis Homesteads Cattle-Dip Management Program* in 1970 to make head-way against the fatal strains of tick-borne cattle diseases so widespread in Kenya. The adult-education component of the project was later revised and expanded when it became apparent that the project had gone awry. Additional educational activities were needed because many of the local farmers clearly did not understand how dipping cattle controls ticks or why dipping cannot work unless it is done regularly. Indeed, some farmers did not dip any of their cattle, some did so in a hit-and-miss fashion, and some dipped only their upgraded animals, leaving the indigenous Zebu stock open to tick attacks. At the same time, the dipping facilities were not being maintained properly, and the Kipsigis Cooperative's management was not obtaining enough chemical concentrate to keep the dipping solution at the necessary strength.

Discussions with farmers and local veterinary workers confirmed the assumption that the farmers did not understand how dipping cattle controls ticks. They also revealed that farmers who did grasp the relationship were reluctant to pay dipping fees when the chemical solution was too weak to be effective. While veterinary extension workers had tried to remedy these problems by consulting with groups of farmers and with members of the Cooperative management, their lack of experience with nonformal adult-education approaches fitted them to do little more than chide uncooperative cattle farmers.

To fill this information gap, two Peace Corps volunteers worked with the veterinary extension agents to develop photobooklets (with Swahili captions and an accompanying taped narration in the local language), three-dimensional demonstration models, and other audio-visual aids for use at the dipping facilities and in farmers' meetings and Cooperative Committee sessions.

Care is exercised in all these learning activities to involve the Wazee (or "venerable elders"). These older farmers are called upon to tell of bygone animal-husbandry practices, and their stories prompt the other farmers to reflect upon changes (such as the introduction of graded animals) and their implications. All the farmers in the groups are free to ask and answer questions and to share information. Outside resource people participate in these discussions, too, but they take pains to refrain from introducing new information until the local people are ready and able to use it.

Outside of the meetings, the primary medium is the audio cassette recorder. Use of the recorder enables project workers to obtain farmers' reactions to the educational activities, to share the proceedings of these meetings with farmers unable to attend, and to record oral history related to agriculture.

RESULTS:

Through discussion, solutions that incorporated both knowledge within the community and new information relevant to the farmers' needs and situations were developed.

Management of the dips became more efficient, a greater emphasis was placed upon maintaining the correct chemical concentration in the dip tanks, an improved system of record-keeping was devised and put to use, and much-needed repairs to the dipping facilities were made. Many farmers began dipping all their cattle regularly, as well as adopting other improved animal-husbandry practices. As a result of these changes, veterinary records show, cattle deaths due to tick-borne diseases decreased substantially once the communication component of the project was functioning.

OF NOTE:

- Educational Field Days were held in the Sotik area, starting in 1970. These Days offered farmers a chance to learn more about animal diseases and animal-husbandry practices.
- To illustrate the idea that understrength solution will not kill ticks, project workers conducted a simple demonstration using only a test tube, colored liquid, and toy cows.
- The written records kept as part of this project show which farmers have dipped their cattle in a given week and how many of his cattle each dipped. Such records, along with calendars, have helped illiterate farmers in particular. They both show the importance of precise timing to effective planning.
- Language problems and production difficulties have limited the effectiveness of 16mm film in this project.
- The audio-visual aids developed in conjunction with the *Kipsigis Cattle Dip Program* reflect Andreas Fuglesang's finding that black and white photographs with insignificant details blocked out often convey information to illiterates better than do silhouettes, line drawings, or untouched-up photographs.
- Slides are displayed outdoors in plastic folders in the daylight, so projectors and darkened rooms are not essential to the program.
- Secondary-school students in Kipsigis listen to the tapes and look at the photoessays made for the Manaret farmers. This way, the two age and social groups keep in touch.

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"The Potential of Locally Produced Materials and Small Media in Community Development," Bruce E. Lundeen and Alisa K.A. Lundeen, unpublished paper, December 1977.

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Clearinghouse on Development Communication
July 1978

THE TRAINING COMPONENT OF THE THABA BOSIU RURAL DEVELOPMENT PROJECT

Lesotho

TARGET AUDIENCE:	Agricultural agents who market improved seeds and fertilizers in the Thaba Bosiu area
OBJECTIVES:	To provide job-related training and information to Village Distribution Point Agents
MEDIA:	Print, radio, demonstrations, role-playing, and interpersonal communication
DONORS/SPONSORS:	The Government of Lesotho, the World Bank, and U.S. AID
DURATION:	Begun in 1976; ongoing under Ministry of Agriculture auspices
CONTACTS:	Paud Murphy, HECG, 29 Lower Baggot Street, Dublin 2, Ireland; Ken Tseko, Lesotho Distance Teaching Center, P.O. Box 781, Maseru 100, Lesotho; Lipholo Makhetha, LDTC, P.O. Box 781, Maseru 100, Lesotho

DESCRIPTION:

The Thaba Bosiu Rural Development Project (TBRDP) was established by the Lesotho Government with assistance from the World Bank and U.S. AID in 1973. It operates in a 121,000-hectare area containing 17,000 farm households near Thaba Bosiu Mountain (the summit on which the first King, Moshoeshe, held out against the Boers and the Zulus). The objectives of the project are to control erosion and to increase crop production, to encourage integrated farming, and to provide data for use in preparing similar projects in other areas. Project activities have included road-building, conducting agricultural research, creating credit programs to help farmers buy seed and fertilizer, establishing farm-supply stores and an asparagus-canning factory, and circulating timely agricultural information to farmers.

In late 1975, *TBRDP* asked the Lesotho Distance Teaching Center (an organization founded in 1974 to make radio-mediated and correspondence courses and various self-instruction materials available to out-of-school learners and to offer technical services and expertise to other educational organizations in Lesotho) to collaborate in the design and production of materials for training Village Distribution Point Agents (*VDPAs*), the villagers who sell the project's supplies for a 3 percent commission. LDTC subsequently conducted a preliminary survey of the agents' work and proposed a training package to *TBRDP*. After some discussion, the two bodies decided to produce illustrated handbooks in English and Sesotho, posters, newsletters, and radio spots for use in training three types of clients: agents whose present skills are inadequate and who are thus not meeting performance standards, competent agents who would perform better if given the chance to master new skills and knowledge, and new recruits. During a five-day training course in Maseru, these groups received illustrated handbooks (for at-home reading) that contain descriptions of the agents' duties and fine points on record-keeping. The second class of trainees also received over a half-year post-training period six issues of a newsletter for their own use and multiple copies of a single poster to distribute. At the same time, they were exposed to eight 60-second radio spots that were broadcast regularly over Radio Lesotho.

An evaluation in 1976 of the work of the Village Distribution Point Agents revealed that the training had not had the desired impact, ostensibly because the original training proposal had not been carried out fully. Accordingly, evaluators recommended that training materials be further integrated, that the training course make extensive use of role-playing activities designed to duplicate on-the-job problems and encounters, and that the handbook play a greater part in training sessions. An additional change proposed for later courses was the involvement of LDTC staff in planning, setting objectives, and working with the course organizers from *TBRDP*. The main objective of this collaboration would have been to prepare for the eventual withdrawal of LDTC expertise when *TBRDP* staff felt satisfied with both the training package and their own ability to use it. As it happened, LDTC assumed the role of materials producer and *TBRDP* of materials distributor; the goal of integrating these two functions was never realized.

By 1978, the training courses had been phased out, although many *TBRDP* staff members have been recruited by the Ministry of Agriculture to continue some of *TBRDP's* programs.

RESULTS:

An informal evaluation conducted by staff from the Lesotho Distance Teaching Center in 1976 revealed that about half the agents had read the entire handbook and half had read parts of it. Yet, only 6 of the 15 quizzed were capable of locating specific sections in the handbook and thus of using it effectively as a reference work. The newsletter had a warmer reception, with three-fifths of the respondents reading it word-for-word and keeping it for future reference. The poster, it seems, had not been put up in most offices, in some cases because it had not been received. Of the nine agents asked if they had tuned into the previous week's program-related radio broadcast, six answered yes but were hard-pressed to recall much information from the show. Over all, responses to questions on particular agricultural practices and information were divided, and performance on a test designed to gauge the VDPA's knowledge of standard forms was poor. Most but not all agents appeared to understand the procedures for extending credit and for receiving consigned goods.

A comparable test was given by LDTC staff to the agents who completed the *TBRDP* training course in January 1977. While only three out of the 16 agents who had taken the test a year before had performed at high levels, 13 of the 16 taking the test in 1977 scored over 80 percent. The difference between these two sets of results is attributed by the curriculum designers to the effect of using mixed media, especially the combination of demonstrations and exercises. Commonly made errors, at the same time, appeared to reflect a lack of arithmetical skills or capabilities that may indicate improper employment-screening practices and not necessarily training failures.

OF NOTE:

- Part of LDTC's role has been to force the various divisions of *TBRDP* to clarify their procedures. Another is to act as a liaison between project administrators and the Village Distribution Point Agents, spelling out the VDPA's duties and problems as part of an attempt to keep paperwork at a minimum. LDTC accepted these responsibilities reluctantly, questioning whether such matters should be left to an outside agency.
- A continuing problem besetting those in charge of the training course is materials distribution.
- Other than training needs, which in fact are accorded relatively low priority within the *TBRDP*, the Village Point Distribution Agents have other basic needs. They need ways, for example, to deal with the problems associated with taking responsibility for large sums of money, with overseeing rat-control measures, with minimizing thefts from the project stores, and with accounting for equipment and work clothes.
- Shifting responsibility for materials design from the *TBRDP* staff had advantages and disadvantages. The main disadvantage, a lack of commitment by *TBRDP* field staff, can probably best be combatted by keeping the staff thoroughly briefed.
- According to one evaluator, poor coordination among the divisions of *TBRDP* that were responsible for training VDPAs reduced the effectiveness of the course and the support scheme.

REFERENCES:

- "Evaluation of a Training Course for VDPAs of the Thaba Bosiu Rural Development Project," Lesotho Distance Teaching Center, January 1978.
- "Training Village Distribution Point Agents," Lesotho Distance Teaching Center, undated.
- "Evaluation of the TBRDP/LDTC Training and Support Program for VDPAs," Lesotho Distance Teaching Center, December 1976.

MALI LIVESTOCK II PROJECT

Mali

TARGET AUDIENCE:	Malian farmers and herders
OBJECTIVES:	To introduce conservation techniques and range-management practices and to improve breeding and production techniques in order to raise the nutritional and economic status of Malians and generate foreign exchange
MEDIA:	Radio, cassette tapes, audio-visual materials, and interpersonal communication
DONORS/SPONSORS:	Agency for International Development and the Government of the Republic of Mali
DURATION:	Preliminary phase begun in April 1977; ongoing through June 1979; 2nd phase planned for 1979-1981
CONTACTS:	Boubacar Sy, Director General, Office Malien du Betail et du Viande (OMBEVI), B.P. 1382, Bamako, Mali; Benedict Tisa, 45 Haddon Avenue, Westmont, NJ 08108, USA; Almouzar Maiga, Thurston F. Teele, or Philip W. Moeller, c/o Chemonics, International Consulting Division, 1120 19th St., N.W., Washington, D.C. 20036; Robert Reeser, Bamako (ID), Department of State, Washington, D.C. 20520

DESCRIPTION:

Negotiations between the U.S. Agency for International Development and the Malian Government on the *Livestock II Project* got under way in drought-ridden Mali in early 1977. More than a relief effort, the project they designed was to provide a basis for self-sustaining agricultural development and to reduce the suffering associated with resettlement schemes. Its specific objectives are to promote the adoption of range-management, livestock-production, and agricultural practices that will increase productivity on existing croplands and enable Malians to farm land that is presently uncultivated. Its three fronts reflect three different but mutually reinforcing approaches to problems that the project designers feel are economic, social, and technological: it has (1) a program in the Dilly region that is concerned with developing, testing, and applying new techniques for dealing with dry lands and livestock problems; (2) a program and facilities in Bamako for training extension workers; and (3) in the southernmost region a "new lands" program focused on the development of underutilized lands (a chief feature of which is tset-se fly control). At the moment, the project staff includes twelve long-term specialists and a variety of short-term consultants.

The training component of the *Livestock II Project* may eventually encompass programs for five different kinds of audiences: existing cadres of livestock extension workers, recent college-level graduates of the *Institut Polytechnique Rural* (IPR) in Katibougou, graduates of IPR's middle-level program in Bamako, graduates of the *Ecole des Infirmiers Veterinaires*, and eighth or ninth-graders from non-technical schools. The courses for these groups are designed to prepare enrollees to assume greater responsibilities — the graduates of the *Ecole des Infirmiers Veterinaires*, for example, will become more well-rounded livestock and range-management advisors, and the youngest trainees will become village-level change agents. Some trainers and administrators are to receive initial training in the United States, and refresher courses are to be conducted periodically at the Sortuba project center for others.

The project's communication specialist, whose full-time services will be required for at least two years, assumes a battery of responsibilities. Some of these tasks are ongoing, while others relate to specific stages of the project's development. Open-ended activities include materials production, facility and equipment maintenance, and coordination of the center's business with that undertaken in the field in Dilly. Sequential activities comprise reviewing available production resources, procuring equipment, field-testing materials (charts, tapes, slides, etc.), stockpiling audio-visual aids, and conducting a thorough evaluation of the communication component at the close of the project's second year in 1979. Perhaps most important, the communication specialist will train change agents in communication methods and in the use of A-V materials in extension work.

RESULTS:

Still in its preliminary phase, the project has not been evaluated. The results of pre-project research, however, have revealed many social and economic factors that are sure to determine the eventual success or failure and the duration of the project.

The pre-project analysis of socio-cultural factors (part of which consisted of personal interviews conducted in six villages with different ethnic identities) indicated that the habits and the needs of the villagers range widely. Some villagers are migratory, some are not. Some are dependent solely upon livestock or agriculture for a living, while some live in mixed economies. At the same time, interaction and cooperation among the many ethnic groups appears to be extensive. Investigations of socio-cultural factors (including human and animal disease patterns, nutritional status, range-management techniques, and knowledge of such subjects), though fairly thorough, were impeded by language differences and by researchers' use of some terms unfamiliar to rural Malians.

The chief findings of the consultant who examined the communication component of the project — that new visual media will have to be introduced slowly and via the agricultural extension agents, that project workers can take very little for granted with respect to the villagers' exposure to modern media, that indigenous media and traditional performers should be used, that the literacy rate is low among the target population, and that the credibility of the staff promises to be a problem and a challenge — show that Mali's needs and problems are typical of those of many developing countries.

OF NOTE:

- Most of the people trained as change agents are recruited from the areas in which they will later work, and many are already in government employ in agencies other than OMBEVI.
- Visual aids are not used solely as teaching devices. They are instrumental in data-gathering, eliciting feedback, and winning local support for project activities.
- OMBEVI, FAO, Radio Mali, and *Alphabetization Functional* collaborate in the operation of the *Mali Livestock II Project*.
- With tape-recorders, one consultant suggested in a first-term report, change agents could help establish an oral library, contribute more significantly to evaluation and monitoring activities, and learn at home at self-selected paces.
- A pre-project survey on women's contribution and role in agriculture was conducted to help project planners focus on the needs of rural Malian women.
- Many Malian staff-members have received overseas training in such countries as Cuba, the United States, and Germany. According to one consultant, these Malians have a keener understanding of the "expatriot mentality" than most expatriot staff-members have of local culture.
- Even before the visual aids used in this project were pre-tested, the target audience was surveyed to determine how familiar and receptive it was to photographs and drawings as media. In general, people responded most positively and actively to realistic pictures of familiar activities, objects, and settings.
- Each technical-assistance specialist has a Malian counterpart who will eventually take over his or her job.

REFERENCES:

"Final Report: Livestock and Ranch Development in the Dilly Area — Media and Communications Aspects," Benedict Tisa, Chemonics, January 1978.

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PLAN PUEBLA

Mexico

TARGET AUDIENCE:	Originally, <i>campesinos</i> in Mexico's Puebla Valley (approximately 100 participants in 1968 and over 8,000 out of a total population of 50,000 in 1976); now, <i>campesinos</i> in 11 Mexican micro-regions
OBJECTIVES:	To establish an eight-component agricultural program for stepping up corn production and to support that program with an agricultural information system
MEDIA:	Print, film, audio-visual aids, demonstrations, and interpersonal communication
DONORS/SPONSORS:	The Rockefeller Foundation working through the International Maize and Wheat Improvement Center (1967-73); Graduate College of Agriculture at Chapingo; the state government of Puebla; and Mexico's Ministry of Agriculture (sole supporter since 1973)
DURATION:	Begun in 1967; expanded in 1978; ongoing
CONTACTS:	Heliodoro Diaz Cisneros, General Secretary, Colegio de Postgraduados, Chapingo, Mexico; Delbert T. Myren, World Bank, 1818 H Street, N.W., Washington, D.C. 20433

DESCRIPTION:

Plan Puebla was started in Mexico in 1967 with funds channeled through the International Maize and Wheat Improvement Center (CIMMYT) by the Rockefeller Foundation. A comprehensive attempt to help *campesinos* with tiny landholdings to increase their productivity, the program was designed to spread word of improved agricultural practices, chemicals, seeds, and technologies and to make sure that these ingredients could be obtained and used. More specifically, the research, informational, evaluative, and administrative components of the project together serve eight practical goals: (1) to introduce higher-yielding varieties of corn, (2) to develop and disseminate information on improved agricultural practices; (3) to open and maintain communication channels between *campesinos* and change agents; (4) to get adequate and timely supplies of agricultural inputs to easily accessible distribution points; (5) to make crop insurance available to *campesinos*; (6) to help bring the costs of agricultural inputs into line with the prices fetched by crops in local markets; (7) to stabilize the market price of corn; and (8) to insure *campesinos* access to low-interest credit. Naturally, an all-fronts program of this magnitude requires the close cooperation of research scientists, agronomists, educators, mass media specialists, anthropologists, administrators, government officials, and bankers — all of whom have been involved in both project planning and implementation.

The communication and evaluation components overlap in *Plan Puebla*. The same channels through which practical information drawn from agronomic research is coursed to farmers are also used to send feedback on project development and innovations-adoption back to researchers and administrators. The resulting process, more circular than two-way, is nonstop and participatory. Its manifold objectives are to increase farmers' awareness of their agricultural options, to enable *campesinos* to adjust their economic expectations upward, and to encourage the adoption of tools, seeds, and techniques needed to realize those expectations. A further critical communication objective is to supply agricultural researchers with psycho-social data (thus enabling them to tailor their recommendations to the prevailing culture, as well as to soil conditions and climate) and with access to the accumulated wisdom acquired by the *campesinos* through trial and error.

The mass media used in *Plan Puebla* include posters, handbills, other audio-visual aids, recordings broadcast in the villages from a sound truck, drama, and radio. During the project's third year, three films — "Do You Want to Increase Your Corn Crop?" and "Agricultural Credit" and "The Savings Account" — were also produced. The actors in all the films are *campesinos*, as are many of the speakers in the radio programs broadcast weekly during the growing season.

Two recent developments in the *Plan Puebla* include the completion of a training center for field-workers in 1976, and the expansion of the program to 11 micro-regions of Mexico in 1975. In addition, projects modeled upon *Plan Puebla* have been initiated in Peru (1971), Colombia (1971), and Honduras (1972).

RESULTS:

While the effectiveness of the communication component of *Plan Puebla* could be measured in terms of farmers' increases in awareness of new agricultural techniques and technologies, the best indicators of the project's success are corn yields, income gains, and improved living conditions. To wit, corn yields per hectare increased 33 percent during the first five years of the project, gross family income increased significantly (from U.S. \$666 in 1967 to U.S. \$825 in 1970, adjusted for inflation), the percentage of families who supplemented the local diet by eating fish once or twice a week tripled between 1967 and 1971, and nearly a third of the *campesinos* in the project area upgraded their homes during the first four years of the project. In addition, the project appears to have dealt the regional unemployment and underemployment problem a sound blow: by recommending labor-intensive instead of capital-intensive practices, *Plan Puebla's* technical-assistance workers helped increase the number of days of labor required per hectare in the area from 40.6 in 1968 to 52.7 in 1973.

Non-economic indicators of the project's impact include positive changes in attitude among farmers who have traditionally been fatalistic and suspicious, support among farmers for group activities (including risk-sharing and long-range planning), a dramatic reduction in the number of *campesinos* who default on farm loans, and a steady increase in the rate of participation in project activities.

OF NOTE:

- Without exception, *campesinos* who have themselves adopted the practices being recommended in *Plan Puebla* become the central actors in the demonstrations.
- The benchmark study conducted in 1968 revealed that the inhabitants of the proposed project site were extremely distrustful of outsiders, ostensibly because part of the lingering legacy of Spanish colonization is a feeling of racial inferiority on the part of the Indians.
- Dependence on formal leaders (elected officials and other prominent citizens) gradually dwindled in this project as informal leaders (people whose interest in the project itself set them apart from others) emerged.
- Technicians who perform their work well for two or three years are offered university fellowships in Master's Degree programs in Chapingo.
- The research branch of *Plan Puebla* has made methodological advances that are proving useful to scientists at work at the National Institute of Agronomic Research in Mexico City.
- Farmers often spontaneously demonstrate pig-castrating, tree-pruning, and other useful skills in the course of a planned demonstration on another topic.
- A *campesino* drama troupe has developed a skit depicting the plight of the *campesino* at the mercy of the bloodsucking middleman. Although its impact has not been evaluated, the play has enjoyed a long run.
- Institutional problems have kept the majority of the *campesinos* in Puebla from participating in the credit scheme developed as part of the project.

REFERENCES:

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- An Institutional Analysis of a Rural Development Project: The Case of the Puebla Project in Mexico*, Ph.D. thesis, University of Wisconsin, 1974.
- "The Puebla Project in Mexico," Heliodoro Diaz Cisneros, Leobardo Jiménez Sánchez, and Reggie J. Laird, paper presented at the Integrated Communication Conference, Cali, Colombia, 1974.
- "Analysis of Communication in the Puebla Project," Delbert T. Myren, paper presented at the Integrated Communication Conference, Cali, Colombia, 1974.

RADIO HUAYACACOTLA

Mexico

TARGET AUDIENCE:	<i>Campesinos</i> and other inhabitants of a 177,000-square-kilometer region in eastern Mexico (roughly 11 million people)
OBJECTIVES:	To stimulate self-reliance, self-expression, cultural integration, and agricultural productivity
MEDIA:	Radio, print, tape recorders, audio-visuals, and interpersonal communication
DONORS/SPONSORS:	Sistema Educativo Radiofónico (through 1973); Fomento Cultural y Educativo (since 1975); U.N. Food and Agriculture Organization; Ashraf Pahlavi Foundation International (Paris)
DURATION:	Begun in 1965; ongoing
CONTACTS:	Information Officer, FFHC/AD, U.N. Food and Agriculture Organization, 00100 Rome, Italy; R. Etemad, Ashraf Pahlavi Foundation International, 41, rue Dauphine, 75006 Paris, France

DESCRIPTION:

Radio Huayacacotla, in operation since 1965, represents an attempt to use "two-way" radio as a stimulus to self-development. Unlike standard listening forums, the project enlists the active participation and cultivates the continuous feedback of the audience, most of which is engaged in agriculture and nearly a third of which is composed of illiterates. Long-term project goals are both practical and idealistic: encouraging self-reliance and self-expression; fostering the social integration of the disenfranchised by making them aware of the economic and social barriers they must work against; providing practical information related to social problems and income-generating activities; promoting activities aimed at raising living standards; and providing recreational opportunities and entertainment. Begun under the auspices of *Sistema Educativo Radiofónico*, the project was taken over in 1975 by *Fomento Cultural y Educativo*, an organization dedicated to improving the lot of marginal socioeconomic groups.

The three components of the *Radio Huayacacotla* project are the radio station itself, the work team (a coordinator, an agriculturist, a communications officer, three field workers, and two radio operators), and an advisor affiliated with the Education Research Center in Mexico. The project's radio programs, broadcast from 4 p.m. to 8 p.m. daily, include news, agricultural education segments, entertainment, and useful information on a variety of subjects. The social problems addressed in programs are selected and developed with the audience's help: listeners write to express needs, complaints, or curiosity. Topics explored in such problem-oriented broadcasts include men's respect for women, the social implications of illiteracy, and the roots of alcoholism. The agricultural programs are keyed to local conditions — no easy task since the broadcast sphere encompasses a variety of climatic and soil conditions. They are also linked to timely demonstrations performed by agronomists on small experimental plots located in *Huayacacotla*.

Three pilot schemes related to the agricultural broadcasts were recently established in a preliminary attempt to increase the project area and the effectiveness of agricultural education. Primarily information campaigns, the pilot projects are aimed at helping *campesinos* boost crop yields by adopting new techniques. The schemes are designed to promote fruit and vegetable production in particular and entail efforts to form farmers' cooperatives to expedite dried-fruit production and marketing.

RESULTS:

Available information makes no mention of either baseline surveys or formative evaluation conducted in conjunction with *Radio Huayacacotla*. Project documents, however, do contain testimonies to voluminous mail received from listeners, to an extraordinary vitality and political consciousness among project participants, and to the replicability of the project elsewhere in Mexico. In addition, the project program was broadened in 1975 primarily because the positive impact of the first decade of operation was deemed significant.

OF NOTE:

- Broadcasters and other workers associated with *Radio Huayacacotla* conduct their own informal studies of local social and economic problems to make sure that they do not lose sight of the plight and perspectives of the listening audience. They also live in the area they serve.
- All members of the work team are Mexican nationals.
- The geography of the broadcast zone includes highlands, forests, plateaus, mountains, and coastal regions. Each of the three pilot agricultural projects is situated in a different climate and at a different altitude.
- The zone covered by the project includes 25 percent of Mexico's towns. About one-eighth of the zone's population is made up of indigenous peoples, nearly all of which speak Spanish as well as their own Indian language.
- Crops grown in the project area include maize, beans, chili, barley, wheat, alfalfa, lettuce, carrots, potatoes, timber, coffee, tobacco, sugar cane, and fruit. Agricultural development in the area has been hampered by chronic shortages of insecticide and fertilizer.
- Agricultural inputs donated by aid agencies and foundations include a fruit dehydrator, seeds, fertilizers, pumps, and insecticides.

REFERENCES:

Unpublished project document, Ashraf Pahlavi Foundation International, Paris, cover letter dated January 1979.

"A Rural Radio Programme for Mexico," Beatriz Bracco, *Ideas and Action*, FAO, No. 199, 1977.

Clearinghouse on Development Communication
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BARANI PROJECT

Pakistan

- TARGET AUDIENCE:** Farmers in the northern portion of two provinces in Pakistan, Punjab and Northwest Frontier
- OBJECTIVE:** To introduce and promote the adoption of income-increasing crops and practices
- MEDIA:** Interpersonal communication, posters, print, radio, slides, film
- DONORS/SPONSORS:** Pakistan's Ministry of Agriculture; U.S. Agency for International Development (AID); World Bank
- DURATION:** 1976 - 1979
- CONTACTS:** Ashraf Hussain, Assistant Publicity Director, Rawalpindi DDA, Ministry of Agriculture, Rawalpindi, Pakistan; Gerald R. McKay, 2231 Hendon Avenue, St. Paul, Minnesota 55108, USA

DESCRIPTION:

In Pakistan there are approximately 40 million acres of unirrigated (barani) land with soil and slope suited to tillage, but only eight to ten million acres are tilled in an average year. Evidence from experience elsewhere, and limited research in Pakistan, suggested that much a higher yield from field crops would be possible by changing current farming technology. It was assumed that higher yields, in turn, would improve farm incomes as well as rural family living, on the small barani farms. In the Barani Project the desired result was the increased production of wheat, maize, and groundnuts (peanuts). Barani literally means "rainfed" and the term identifies the northern portion of two provinces, Punjab and Northwest Frontier, where farmers raise crops with an annual rainfall of 25 to 50 cms. without the benefit of irrigation. Launched in 1976, the Barani Project was sponsored by the U.S. Agency for International Development (AID) with the Government of Pakistan. The contractor provided technical assistance and support the project. A Barani Project Director was provided by the Government of Pakistan in each of the two provinces (at Rawalpindi and Peshwar), with supporting project personnel, offices, and logistic support.

A major problem faced by project members was making information available to the farmers living in more than 10,000 villages in the Project areas. During the first two years of the project the staff conducted demonstrations with more than 2,000 plots and collected data on fertilizer rates, pest control, harvesting methods, and yields. But the information was not generally available to farmers who could use it. Farmers in the Barani areas were getting wheat yields averaging 1,260 kilograms per hectare while a series of farm demonstration plots under controlled conditions averaged 2,232 kg./ha. Demonstration plots of maize showed similar increases. A few farmers had learned about fertilizing and other recommended agricultural practices, but most farmers were using the same methods that had been used for centuries. Hence, a necessary part of the project was a strong communications program with printed and other educational materials.

The Barani staff first conducted a study to determine where and how farmers were currently getting information and the potential for using radio, television, newspapers, film, and other media. Radio had strong possibilities; there were three stations that broadcast to all of northern Pakistan. Television and newspapers, on the other hand, would be of little use since they generally reached only the large cities. Single page fact sheets, where they had been tried, had been accepted. However, most of the agricultural research information had not been made available to farmers in any form.

The Barani Project utilized the Agricultural Extension Service (part of the Ministry of Agriculture), and it was the Extension Field Assistants (FA's) who were responsible for bringing information to the farmers. Each FA worked directly with from 200 to 500 farmers. To make the distribution of information and materials effective, the FA's and their supervisors were trained. The training and distribution plan was modeled after the Benor system of extension education. The plan that Benor (a World Bank agricultural advisor) developed had two important aspects: 1) presenting the information in small units; and 2) making the presentations at regularly scheduled and well-timed intervals. Using this system as a base, four information units were planned to implement the program: 1) four series of single-page fact sheets on wheat, maize, groundnuts, and control of rodents and birds; 2) a series of posters based on the fact sheets; 3) a series of radio scripts summarizing each fact sheet; 4) a set of slides to correspond with each fact sheet. These materials were put into packages, each containing a single-page fact sheet, a corresponding poster, set of slides, and radio script. In addition, one 16mm color film about 20 minutes long was made to show recommended practices in raising wheat. Since most villages did not have electricity, however, use of the film was limited to the larger centers.

RESULTS:

According to an impact evaluation study made on the Barani Project, 75 percent of the farmers who allowed trial plots on their land became adopters of the improved technology and 49 percent of the farmers who did not participate became adopters.

Another accomplishment of the project was an improvement in the in-service training of field staff of the Agricultural Extension Service and in their subsequent outreach to farmers. This was done by upgrading the quality of training through the use of relevant films, slide series, crop production manuals, and other visual aids.

The major types of information farmers reported receiving included a) land preparation and cultivation methods; b) new seeding and fertilizing methods; c) weeding, pesticides, and insecticides; and d) well irrigation, fruit and vegetable cultivation, and maintenance of animals. Major sources of information were other farmers, agricultural extension and other officials, and radio agricultural programs.

OF NOTE:

- o Farmers were considered "adopters" if they used the new varieties of high yielding (HYV) seeds and new chemical fertilizers.
- o The willingness of farmers in different areas to adopt new practices was strongly influenced by several factors: 1) Rainfall - Higher adoption rates were directly related to higher amounts of rainfall, since the farmer had less risk with more rain; 2) Age - Older farmers were more traditional and hence less willing than the younger farmers to change their methods; 3) Education - Farmers who were more educated could better understand how they would benefit from adopting the new techniques.

REFERENCES:

"Communicating With Agricultural Producers," by Gerald R. McKay in Agribusiness Worldwide, Vol. 1, No. 3, April/May 1980.

Pakistan Barani Project Summary Report: Nos. 1 and 2 by Clarence J. Miller, No. 4 by Gerald R. McKay, No. 5 by Lawrence Ulsaker, and No. 6 by William D. Burgess, Jr. Experience, Inc., 1978-1979.

VIDEO-BASED TRAINING FOR RURAL DEVELOPMENT

Peru

- TARGET AUDIENCE:** Peruvian farmers in the coastal plains, Andean highlands, and tropical forests
- OBJECTIVE:** To develop and apply on a large scale, audiovisual methodology to train farmers in appropriate farming techniques
- DONORS/SPONSORS:** Government of Peru; United Nations Development Programme (UNDP); Food and Agriculture Organization (FAO); Technical Cooperative Program; Dutch bilateral assistance; Friedrich-Ebert Foundation
- MEDIA:** Interpersonal communication, videotape, print
- DURATION:** 1974 - ongoing
- CONTACTS:** Manuel Calvelo Rios, FAO-CESPAC, Per 76/003 Apto. 4480, Osa Mayor No. 118-Monterrico, Lima, Peru; Colin Fraser, Development Support Communication Branch Chief, FAO-UNDP, Via delle Terme di Caracalla, 00100 Rome, Italy

DESCRIPTION:

When, in 1969, the government of Peru began a nationwide program of agrarian reform, a massive supporting education effort was needed to help campesinos (rural farmers) to quickly acquire basic farm management skills and modern agricultural techniques they would need as new landholders. To run this massive education program, the government of Peru in 1970 set up the Centro Nacional de Capacitación y Investigación para la Reforma Agraria (CENCIRA)--the National Agrarian Reform Training and Research Center--within the Ministry of Agriculture. Financial assistance for this effort was provided by UNDP, while technical assistance came from the FAO. In February 1974, CENCIRA enlisted the expertise of Manuel Calvelo Rios, an early pioneer in Chile in video-based training. A video production center, CESPAC (the Centro de Servicios de Pedagogía Audiovisual para la Capacitación), was established by CENCIRA in Lima. To meet specific needs of the varying geographic areas--coastal plain, highlands, and tropical forest--five regional production centers were also set up under CESPAC.

The first step was to develop a rigorous 90-day program to train audiovisual teachers as video producers. Training covered all parts of the video-based training process including research, script-writing, field recording, editing, testing of curriculum with campesinos, etc. Such broad-based training made the teams' members interchangeable. Immediately following the 90-day training period, pairs of trainees would form a production unit and begin producing courses. The number of lessons per course offered ranges from four to thirty. Each lesson tape is approximately 18 minutes long and is generally accompanied by simple print materials to be handed out to campesinos. Agricultural cooperative farmer members decide which course they want and CESPAC then sends playback equipment to the local extension unit. One lesson per day is presented, either in the morning before the campesinos go to the field or in the afternoon when they return. In addition to the 18-minute video presentation, there is discussion and review of the print material, making the total length of each lesson approximately two hours.

Production equipment falls into four categories: that which is used in the filming unit, the playback unit, the recording unit, and the editing unit. Broadcast over an educational TV circuit, course material (much of which is taped in the field) is edited in the microstudio where supplementary material is added. Programs taped in the field are carried back to the campesinos via the playback unit. In all phases of planning and production, feedback from the target audience plays an important role.

RESULTS:

An evaluation made in January-February 1980 showed that 80 percent of the campesinos liked the video-based training. There was, however, some criticism that cooperative managers selected the courses without prior consultation with the campesinos and then made attendance compulsory, and that campesinos were ignored by CESPAC in the planning and production of video courses. By November 1981, the Peruvian project had made more than 600 18-minute video lessons, trained over 140 video producers, and reached some 102,000 campesinos with video-based training.

The latest available cost figures show that for every 1,000 campesinos taught by the courses, production costs are approximately \$12.00 per campesino. This amount includes the depreciation of equipment, cost of consultant expertise, etc. The video equipment portion of the total cost is only 10 percent of the program, which contradicts the widely held belief that the costs of this type of instruction are high due to equipment costs.

Video has proved to be an invaluable tool for grass-roots-level training. The audiovisual nature of video overcomes the problem of high illiteracy in rural areas at one stroke. Another problem is that extensionists and trainers themselves lack training and knowledge. Training programs on video, produced in conjunction with good subject matter specialists, will upgrade and standardize the quality of information being transmitted to farmers. Yet another problem is the shortage of extension and training staff in rural areas. Use of video can help maximize the effectiveness of their training activities with farmers and enable them to present, in one audiovisual course, a complete agricultural operation or crop-growing cycle.

Following the purchase of new equipment (made possible by a \$500,000 budget from the Peruvian government), CESPAC decided to make VTR training methodology available to regional and local development projects in Peru. An intensive training course for VTR trainees was set up which enables them to apply CESPAC's courses to their own activities, using CESPAC's equipment and course materials.

The Peruvian project has spun off similar, although smaller, projects in Mexico, Honduras, Paraguay, and Brazil, and has also provided consultant advice in Argentina, Ecuador, the Dominican Republic, and Bolivia. At a meeting of extension directors from all over Latin America and the Caribbean held in Santo Domingo in April 1981, a Peruvian video presentation and discussion resulted in a resolution that the FAO be called on to promote video-based farmer training methodology throughout the region.

OF NOTE:

- o Logistical problems of maintaining the regional production units led to the decision to close the regional centers. As an alternative, CESPAC sends out teams of audiovisual teachers to produce courses in the different ecological zones to meet peoples' specific geographic and environmental needs.
- o Although purchased more than six years ago, all of the equipment (3/4" color Umatic cassette for program production and 1/2" Betamax cassette for playback with two audiotracks for two languages--Spanish and/or Quechua and Aymara) is still working.
- o The Peruvian government was so pleased with the success of the program that the original 34 extension units equipped with video playback units were increased to 150.

REFERENCES:

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"Mass Communication Technology, A Case Study in Training Campesinos," by Manuel Calvelo Rios, Development Communication Report No. 25, January 1979.

Technical Analysis PER/76/003 Project. "Capacitacion Masiva Audiovisual para el Desarrollo Rural." UNDP/FAO/CENCIRA Report on Media Design prepared by Gerardo Van Alkemade, Lima, Peru, 1979.

"Video in the Field--A Novel Approach to Farmer Training," by Colin Fraser. Educational Broadcasting International. Vol. 13, No. 3, September 1980.

MASAGANA 99

Philippines

TARGET AUDIENCE:	Rice producers in 59 Filipino provinces (approximately 900,000 farmers, according to official estimates)
OBJECTIVES:	To increase rice yields by supplying farmers with credit, loans, agricultural inputs, and timely information on agricultural concepts and practices
MEDIA:	Radio, comics, booklets, flyers, bulletins, vernacular magazines, newspapers, posters, TV, and interpersonal communication
DONORS/SPONSORS:	The National Food and Agriculture Council of the Philippines (an organization composed of 17 Filipino government agencies and banks); the U.S. Agency for International Development; and the International Rice Research Institute
DURATION:	Pilot project and research conducted from 1971 to 1973; implementation phase begun in 1973; ongoing
CONTACTS:	Dr. Arturo Tanco, Secretary of Agriculture, Quezon City, Philippines; Domingo F. Panganiban, Director, National Food and Agriculture Council, Quezon City, Philippines; J.D. Drilon, Jr., Director, Southeast Asian Regional Center for Graduate Study and Research in Agriculture, U.P. at Los Baños, College, Laguna, Philippines; Kenneth F. Smith, OHP USAID Korea, c/o U.S. Embassy, Seoul, APO S.F., CA 96301, USA

DESCRIPTION:

President Ferdinand Marcos launched *Masagana 99* in May of 1973 in a nationally televised ceremony. Calling the project "a program of survival" in the wake of regional flooding in 1972 and of a national drought in 1972/3, Marcos rallied the nation to cooperate in a rice-growing scheme billed as a remedy to a production slump that threatened to deplete the Philippines' foreign exchange and work other economic injuries. The note of urgency reflected the fact that the rice shortage that year had been estimated at 700,000 tons. In terms of the number of farmers involved, the degree of government and private-sector collaboration, geographic sweep, the use of the mass media, reliance upon trained extension agents, the spread of new rice-farming technologies, and gains in rice yields, the project Marcos announced was the largest and most comprehensive in the nation's history.

Masagana 99 has 11 elements. They include (1) a research-based technology package, (2) a scheme for the production and distribution of seeds, (3) a fertilizer allocation and distribution system, (4) a campaign aimed at controlling pests and plant diseases, (5) a credit scheme, (6) a program for distributing irrigation pumps and otherwise improving irrigation systems, (7) a program for increasing the number and reach of mobile agricultural extension agents, (8) a mass media campaign created to spread information and to educate the public on agricultural concepts and practices, and (9) a system of price supports coupled with procurement and grain-storage programs. The remaining two elements, administrative and cross-sectoral, are a focus on carefully defined target areas and a management unit charged with planning, implementing, and monitoring the overall program.

Radio functions as the mainstay of the mass media component of *Masagana 99*. Its heavy use reflects research findings that radio reaches up to 85 percent of the population and that three out of every four Filipino farmers own a transistor radio. Over 224 radio stations broadcast advice, jingles, and skits on agriculture ten times per broadcast day, while 125 radio stations carry over 50 local agricultural programs. Principal back-up media include instructional comics, booklets and bulletins in the eight major dialects of the country, newspapers (which voluntarily devote ample news space to the project), and instructional promotional posters. TV's role has been limited, consisting primarily of coverage of the project's opening ceremony and of occasional field activities.

The agricultural broadcasters involved in this project serve as more than disc jockeys. They act as information officers in the Provincial Action Committees (the project's basic administrative units), answer queries from listeners, tape interviews with both information suppliers and information users, conduct research related to the broadcasts, and attend community activities related to food production. In addition, they keep daily broadcasting logs, meet weekly with the provincial broadcasting authorities to plan and review programming, and stay abreast of the informational and educational activities of all agricultural and rural development agencies.

In 1977, *Masagana 99's* emphases on realizing higher yields and including increasing numbers of farm families were intensified. Since then, the project has been known as *Masagana 99 + 10*.

RESULTS:

Despite transportation problems, inclement weather, distribution tie-ups, and pest infestations, rice yields in the *Masagana 99* area increased dramatically — 28 percent from 1973 to 1974, an additional 1 percent in 1975, and another 10 percent in 1976. In 1974/5, for example, yields averaged 3.3 tons per hectare in the project area and .77 tons in the areas not covered by the project. Predictably, initial production leaps of the magnitude realized in the project area boosted farmers' gross incomes radically. For example, at the end of the program's first year, one study shows, farmers in three participating provinces (in which individual landholdings averaged slightly over two hectares) enjoyed income gains of 118 percent. Since 1976, the total harvested crop has steadily gone up, and in late 1977 the Philippines exported 25,000 metric tons to Malaysia and Vietnam. Total rice exports, including 1977's and 1978's, are expected to total 149,000 metric tons. The repayment problem, which has plagued the program, has grown less severe, but the number of farmers participating has dropped to 249,000, and inflation and cost increases of agricultural inputs have wiped out some of the gains made by the majority of participants.

The impact of the media and messages used in *Masagana 99* has not been evaluated apart from overall impact of the project on production totals and income gains.

OF NOTE:

- The word *masagana* means bountiful harvest and the 99 of the project title refers to the target yield of 99 cavans (1 cavan equalled 44 kilos at the outset of the program but has since been adjusted to equal 50 kilos).
- The basic research related to this project was conducted by the International Rice Research Institute, the University of the Philippines at Los Baños, and the Philippines Bureau of Plant Industry. The pilot phase was implemented by the National Food and Agriculture Council of the Department of Agriculture and Natural Resources, whose efforts were supported by the Bureau of Agricultural Extension, IRRI, BPI, and the U.S. Agency for International Development.
- The Management Information System developed in conjunction with *Masagana 99* was designed to help project managers overcome numerous administrative problems that typically beset agricultural projects: weaknesses in links between information sources and decision-makers, difficulties associated with distinguishing causal factors of production from incidental factors, and problems bearing on the coherence and reliability of information culled from many sources. The MIS adopted includes baseline data, standard indicators on data, "on line" data from the field, regular sample surveys, set procedures for analyzing data, feedback and evaluation, carefully spelled out operating assumptions, and other analytical tools for decision-making.
- The field staff reports to a Provincial Program Officer, who summarizes its comments and relays them first by radio and then by mail to the Management Committee Staff.
- Purchases of consumer goods such as cook stoves, refrigerators, and motorcycles by farm families involved in *Masagana 99* have increased so dramatically in some areas that the new variety of rice is sometimes called *Honda Rice*.

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- "An Agricultural Management Information System: Lessons from Masagana 99," Kenneth F. Smith, PASITAM Design Notes, No. 7, May 1976.
- "A Communication Behavior Study of Small Rice Farmers: Diffusion and Feedback in the Masagna 99 Rice Production Program in the Philippines," Hernando V. Gonzalez II, unpublished M.A. thesis, University of Hawaii, December 1977.
- "Masagana 99: A Renaissance in Agricultural Communication," Vicente C. de Jesus, paper presented to the 3rd Research-Media Workshop of the Philippine Council for Agricultural Research, Davao City, August 1975.
- "Masagana 99 Program: Farmers', Technicians', and Credit Agencies' Viewpoints," Eusebio P. Mariano, paper presented to the First Agricultural Policy Conference for Policy and Development Studies, U.P. at Los Baños, April 1975.

RADIO EDUCATIVE/PILOT PROJECT IN COMMUNICATION MEDIA IN ADULT EDUCATION Senegal

TARGET AUDIENCE:	Senegalese farmers, livestock producers, fishermen, and others (roughly two million people)
OBJECTIVES:	To provide food producers with practical information and with the opportunity to express their opinions systematically and effectively; to provide technical training
MEDIA:	Radio, correspondence, film, and interpersonal communication
DONORS/SPONSORS:	The Senegalese Government (sole supporter since 1973) and UNESCO (until 1973), with technical assistance in the preliminary stages from the governments of Canada and France
DURATION:	Initiated in 1968; ongoing
CONTACTS:	Boubacar Sock, EARO UNICEF, P.O. Box 44, 114 Nairobi, Kenya; Henry R. Cassirer, Les Moulins, 74290 Menthon-St. Bernard, France; and Radio Educative, Office de Radio/Télévision du Sénégal (ORTS), B.P. 1765, Dakar, Senegal

DESCRIPTION:

Senegal was the only African nation to take UNESCO up on the offer made in the early 1960s to establish "a pilot center for the production and testing of audio-visual materials and equipment for adult education" in Africa. The project that subsequently emerged had two dimensions: *Radio Educative Rurale* (now called simply *Radio Educative*) and a five-year television component (which ended in 1969). The TV broadcasts, 121 programs in all, were directed to 250 women in Dakar and remained strictly experimental. The radio broadcasts, in contrast, were originally intended for a potential audience of 800,000 (the farm population in the three *Wolof*-speaking administrative regions reached by the pilot broadcasts) and later became nationwide. The primary aims of the project were: to test the use of modern media in the context of adult education in Africa, to create a demonstration center of possible use to other developing countries, to train local people to become technicians and producers, and to help restore to ordinary people the sense of personal power eroded during decades of colonial rule.

The complexity of its mandate and numerous administrative bottlenecks within the Senegalese bureaucracy together kept the radio component from getting into full swing until 1968, when President Senghor himself intervened. Calling for government reorganization and cooperation, Senghor provided the missing ingredient: committed leadership. Under his guidance, *Radio Educative* became an information duct, a change agent, and a government watchdog.

Under the project design finally implemented, 57 radio listening groups were established in the pilot provinces of Thies and Diourbel in the Sine Saloum. Programming was to focus on topics of local and pressing concern — namely, the production and marketing of groundnuts, the responsiveness of government agencies to the peasant farmers' needs, the ways in which debts are incurred and repaid in the villages, and other critical social and health problems. The groups were led by regional staff members of the department of "Animation Rurale" (which has since merged with other government departments) or by animators recruited as volunteers in the village, each of whom took a three-day training course in group dynamics. The third element of this communication system, farmer feedback, took the forms of recordings made in the field and letters. Members of listening groups dictated letters, with the handful of literate members doing double duty as scribes, to the higher-ups in government and to the President himself. In these letters, the peasants aired their complaints, exposed what they believed to be cases of government ineptitude, and took the government to task for standing behind unfair or short-sighted policies — all of this they did without fear of censure and with the intention of making themselves heard.

RESULTS:

The most meaningful indicator of *Radio Educative's* initial impact is probably its effect on national policy. As a direct outcome of the "radio dialogue" begun in 1968, a flood of letters poured into government offices, a flood that eventually moved President Senghor to standardize the price given to groundnut producers (to the great advantage of the producers in remote areas, who were once discriminated against in the marketplace) and to annul in 1970 peasant debts contracted in the purchase of seeds, agricultural equipment, and supplies.

A second indicator of *Radio Educative's* worth is its expansion and its continuation. *Radio Educative* has operated without any foreign assistance since 1973. While some observers feel that the growth in the number of people participating in listening groups has not kept pace with the growth in the number of individual listeners and that the potential of the broadcasts to promote community participation is thus not being realized, overall response has by all estimates remained excellent. More than 500 villages have sent in thousands of letters, and the "malaise paysan" is showing some signs of crumbling in the face of incentives for action and participation.

Over time the listening audience has dispersed, with group listening giving way to individual listening. Reasons for this shift include the disappearance of *Animation Rurale* activity, *Radio Educative's* lack of personnel and transport, and the boom in cheap transistor radios. This tendency has not reduced the project's impact or emphasis on feedback, however.

OF NOTE:

- Since anyone who understands *Wolof* can profitably listen to *Radio Educative's* broadcasts, the actual audience has always exceeded the target audience. In addition, programs in *Peul*, *Malinke*, and other languages are now being prepared.
- About 70 percent of *Radio Educative's* programs are recorded outside the studio.
- Broadcasting in *Wolof*, which many Senegalese peasants speak, presented special problems to the less than astute moderator of a listening group since *Wolof* has a special feature: a code for transmitting messages intended only for the ears of the initiated.
- Three *Wolof* concepts used to interpret the peasants' statements are "TAWAT" (complaining), "DIGUAT" (disputing), and "THIOW" (making a fuss about a problem).
- Some government employees have complained about *Radio Educative*, claiming that peasants have no need to write the authorities when the authorities' representatives are on hand to hear them out or that it is disrespectful and counterproductive to challenge the existing administrative hierarchy.
- At a pan-African communication conference in Dakar in 1977, Senegal's President Senghor said that "educational radio should above all help peasants to cultivate the most authentic African values — courtesy, a liking for work, and a sense of solidarity — at the same time that it instills in them the sense of thrift, organization and method, qualities more properly European."
- In the early years of the project, some Senegalese viewed it as a UNESCO communication laboratory, while UNESCO employees tended to view the project as a joint venture of mutual benefit to both UNESCO researchers and the Senegalese people.

REFERENCES:

"Radio in an African Country: A Description of Senegal's Pilot Project," Henry R. Cassirer, in *Radio for Education & Development: Case Studies*, Vol. II, World Bank Staff Working Paper No. 266, May 1977.

Communication & Rural Development, Juan E. Diaz Bordenave, UNESCO, Paris, 1977.

"Senegalese Experience in Using Radio Broadcasting for Animating and Educating Basic Communities with a View to Development," Boubacar Sock, a presentation at IEC's Conference on Distance Learning, Dartington, England, September 1977.

Clearinghouse on Development Communication
April 1978

RURAL TELEVISION PROJECT

Sudan

- TARGET AUDIENCE: Tenant farmers in the Sudanese province of Gezira
- OBJECTIVE: To use television as a medium of agricultural extension and adult education to inform, instruct, and motivate the population
- MEDIA: Television, interpersonal communication
- DONORS/SPONSORS: Government of Sudan; Government of the Federal Republic of Germany; United Nations Food and Agricultural Organization (FAO); and a private Dutch organization
- DURATION: 1974 - ongoing
- CONTACTS: Mr. Alfatih Al Tijani, Chairman and Director, National Organization for Radio and TV, Khartoum, Sudan

DESCRIPTION:

The original suggestion for the Sudan Rural Television (RTV) was made by the FAO in 1971 and launched in 1974 in the Gezira Province as an experiment in target group television. Located between the Blue and White Nile in Central Sudan, the Gezira Province was chosen because it is the country's second most densely populated region (1.4 million) and is the "economic backbone" of the country, growing Sudan's principal cash crop—cotton—which accounts for 75 percent of the national income. The aim of the project was the socio-economic development of the Gezira tenant farmers through discussion of specifically designed educational TV programs in village viewing clubs. In an area with a relatively high standard of education where changes in the economic structure and agricultural production techniques are imminent, TV was introduced to help inform, instruct, and motivate the population, and to serve as a forum for villagers' felt needs.

When the project started its field activities in 1975, TV sets and generators were provided by West German and FAO technical aid. Next, a sample of villages was selected for the pilot phase of the project. Since the combined price of a television set and generator was high (U.S. \$800.00), TV viewing groups were set up in the village clubs (nadi), which generally serve for social gatherings as well as for organizing cultural, sports, and political activities. The first sample of viewing clubs was set up in three areas of the Gezira (South, Center, and Messelemiya). The villages were selected by the Gezira Board and approved by the Liaison Office staff. The main criterion was that a selected village should be some kind of center for other villages around so as to enhance the impact (if any) of the TV programs.

In addition to providing a shelter for the generator and a table for the TV set, the selected villages were asked to nominate one person to be trained as a TV club monitor. The tasks of the monitor were to take care of the TV set and generator, form a TV viewing club, initiate and lead discussions of rural TV programs, and initiate translation of new ideas from these programs into action at the village level. The monitors were trained for these responsibilities in a one-week training course given by the Liaison Office. By July 1976, 46 monitors had been trained, when training was temporarily suspended as the rainy season made communication with the villages difficult and equipment could not be installed. By the end of the rainy season (November 1976) it was felt that the production and transmission of TV programs had not yet achieved the intended level (due primarily to shortage of staff, failure of equipment, and shortage of gasoline). In addition, there were indications that the performance of TV clubs might not meet the hoped-for standards. A January 1977 survey showed that none of the viewing clubs had emerged as separate entities from the social clubs. TV viewing and discussion of programs were considered functions of the social clubs. The survey also revealed that the monitors were not as active and discussion not

as frequent as had been hoped. A considerable number of monitors had, in fact, left their villages. Government officials being transferred accounted for some; others were private individuals looking for jobs elsewhere.

RESULTS:

In 1976-1977 the RTV produced over 100 programs in the following areas: health, agriculture, social affairs, and women's affairs. RTV also produced a twice-monthly program, AROUND AND ABOUT THE TV CLUBS, as a television newsletter.

As a result of the (January 1977) survey, the activities of the TV Clubs' Liaison Office were stepped up. Measures were taken to ensure a closer contact with the monitors, by holding monthly meetings at the Wad Medani TV station, by regular visits of Liaison Office staff to village clubs, and by improving the contents of the monthly bulletin. Also, the training course was redesigned, to better define the function of TV viewing in social clubs, and to make monitors aware of the nature of community development. After negotiations, the Ministry of Education promised that teachers would not be transferred for a certain period after they had been trained as monitors. A decision was made to train two monitors for each club, and to hold courses for the Gezira Board field staff to illustrate use of TV programs and village discussions in their field work.

Although rural television in the Gezira cannot be said to have achieved its aims, a great deal has been learned which will be of value to future projects. According to John Low, the Ministry of Overseas Development's advisor on educational television production, RTV in Sudan still needs to experiment with programs specifically designed to integrate TV target group communities, and to investigate the role more efficient rural broadcasting could play in an organized rural development strategy.

OF NOTE:

- o While it is generally believed that television can be used successfully as a means of communication to rural areas, the Sudan Rural Television Project feels that TV can only be efficient when complemented by a field organization (like an extension service).
- o Television is still dominated by the old journalism pattern of giving the news to the readers. The new concept of development support communication, which requires two-way communication, not only as a formalized method, but as a new way of thinking, has not yet taken hold. Because the Gezira farmers are not given a chance to present their views to producers, many programs misrepresent them by showing their needs as seen by the TV production staff.
- o Including women in the viewing groups presented some problems, and very few were to be found watching the programs or involved in discussion. Not only did the older men not approve of the presence of women, but the women themselves felt uncomfortably exposed.
- o All of the producers for RTV are trained in the British Council's Media Department in London, although the training is paid for by the West German government.

REFERENCES:

"Sudan Rural Television Project - Work Report No. 3," by Reinold E. Thiel. Media Projekte Report No. 53. Wad Medani, Sudan, December 1977.

"The Sudan Rural Television Experiment," by John Low. Educational Broadcasting International. Vol. 11, No. 3. September 1978.

"Rural TV in the Sudan" (Interview with Mr. Abbas Ahmed El Tom, Director of Programs, Wad Medani TV Station), Mike Barrett. Educational Broadcasting International. Vol. 10, No. 2. June 1977.

Clearinghouse on Development Communication
December 1983

(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

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THE RADIO FARM FORUM PILOT PROJECT Thailand

TARGET AUDIENCE:	Thai farmers and the agricultural extension service
OBJECTIVE:	To test the effectiveness of the radio forum concept in increasing two-way communication between farmers and Thai agricultural extension agents
MEDIA:	Radio and publications, reinforced by interpersonal communications
DONORS/SPONSORS:	The Department of Agricultural Extension (DOAE) of the Ministry of Agriculture and Cooperatives of the Royal Thai Government, and the UNDP/Development Support Communication Service
DURATION:	Conceived in 1968; first executed in 1975; currently being expanded to cover five provinces in 1977 and 15 provinces in 1978
CONTACT:	Mr. Pote Chumsri, Department of Agricultural Extension, Ministry of Agriculture and Cooperatives, Rajadamnern Avenue, Bangkok, Thailand

DESCRIPTION:

Although the *Radio Farm Forum Project* was conceived in 1968, implementation of the project was delayed several years while the DOAE was reorganized. In 1975, a pilot project was conducted to test the applicability of the radio forum concept to Thailand's farming region. After the study area was systematically selected, listening groups were formed with the cooperation of the village headmen. This was followed by peer-selection of four Radio Farm Forum leaders in each of the eight village groups in the project. Finally, training programs for the local forum leaders were activated.

When the parts of the project were in place, weekly radio programs were broadcast. After each half-hour program, village listening groups discussed the content of the program and of supplementary printed materials prepared by DOAE. They were encouraged to comment on both the programs and the literature and to find local practical applications for the ideas and practices both mentioned. Problems that could not be worked out among the village listening groups were referred via the weekly reports prepared by the RFF leaders to the extension officer of the DOAE and to other people or organizations able to offer assistance.

Responses to the listening groups took three basic forms. Radio broadcasts and publications were used to answer some questions, while DOAE field staff and other specialists visited the villages to solve other problems. A third type of contact involved whole groups in trips to seed stores, to university research stations or to demonstration plots, and in both short seminars and film-showing sessions.

RESULTS:

The *Radio Farm Forum Project* increased the flow of information between farmers and extension agents in both directions. The extension agents saw the value of making regular and frequent contacts with farmers and enjoyed the sense of continuity the program gave them. For their part, farmers tended to rely increasingly upon the agents once they came to feel that the agents were dealing with their problems and needs on a timely basis. Moreover, because the messages dealt with specific problems, the farmers tended to remember them. Accordingly, the agents came to take more and more satisfaction in their work. In short, a felicitous self-reinforcing dynamic evolved.

More generally, the project succeeded in organizing interest groups to solve shared problems and in demonstrating the effectiveness of reinforcing consistent messages through various communication channels. It showed the agents that the program was feasible and the farmers that it was desirable. Indeed, farmers from areas adjacent to the radio project inquired about and requested similar programs.

OF NOTE:

- The *Radio Farm Forum Project* successfully combined with an FAO-sponsored project to improve irrigated agriculture in northeastern Thailand. In seeking the joint cooperation of various government departments (the Ministry of Commerce, the Rice Bureau, etc.) and of various international agencies, the project may also have opened up or strengthened intra-governmental and inter-governmental communications lines.
- Farm forums in many cases became forums for other local problems.
- Village headmen were enlisted to help lend legitimacy to the project, and students from the local university and agricultural college helped conduct the field surveys.
- The success of the *Radio Farm Forum Project* prompted the Thai Government to consider integrating the radio forum approach into other activities. The project itself also led to the government's self-appraisal of its capacity to evaluate such efforts.

REFERENCES:

"Summary Report on the Radio Farm Forum Pilot Project," (RB # 336), Supalak Purnasiri and Robert S. Griffin, UNDP/DSCS, Bangkok, Thailand, November 1976.

Clearinghouse on Development Communication
June 1977

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MEMORANDUM

January 8, 1985

TO: Anthony Meyer, S&T/ED

FROM: Judy Brace, Clearinghouse on Development Communication *JB*

SUBJECT: Approval of wall display on Educational Radio as a Special Report

In February 1985, you asked the Clearinghouse to design a wall display that would feature AID's activities in Interactive Radio for Instruction. As a design for such a wall evolved, and draft layouts were submitted for review, the concept was expanded to reflect the breadth of the Office's activities in education, health, agriculture, telecommunications, and information services.

The Clearinghouse proceeded to gather photographs as closely representative as possible, to use them as a basis for draft explanatory text, and to submit a scale model of the wall for approval. When this was received through you, the Clearinghouse proceeded to have 17 photographs enlarged and mounted, and 15 text boards produced. The display was installed on the weekend of November 23/24, 1985.

Your signature below signifies approval of this wall display as a Special Report deliverable under contract: DPE-1231-C-00-4066-00.

Anthony Meyer S&T/ED

Anthony Meyer, Project Monitor

1/16/85

Date



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MEMORANDUM


April 10, 1986

TO: Anthony Meyer, S&T/ED
FROM: Judy Brace, Clearinghouse on Development Communication
SUBJECT: Assistance in defining AID funding levels to education

On April 2nd we were called by David Sprague to request assistance in pulling together funding figures that would indicate AID's support to education. I spent some time with him to understand what was needed, and to collect materials that he wanted us to work from. He had had a print-out prepared of the 105 account for development assistance, including Bureau and Regional project funding, and "functional" funding levels (i.e. planning policy/analysis, vocational education). From these we prepared a series of breakdowns indicating funding levels. These are attached.

We were to try to track down similar information from the ESF data. This we were able to do, although it took some time to find the right office and to oversee the selection of descriptors. Bob Vittel was able, however, to follow through with the proper people to obtain information in the same format as was that of the 105 account. We made the same funding-level breakdown for these figures (also attached).

We request your concurrence that this assistance in preparing documentation ultimately destined for the Administrator, be designated a Special Report under the Clearinghouse contract deliverables.



Anthony J. Meyer, Project Monitor

4/21/86

Date

EDC file

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MEMORANDUM

August 29, 1985

TO: Anthony Meyer, S&T/ED
FROM: *JB* Judy Brace, Clearinghouse on Development Communication
SUBJECT: Clearinghouse Quarterly Report

Attached you will find the fourth Quarterly Report of Clearinghouse contract: DPE-1231-c-00-4066-00. Quarterly Reports are among the deliverables of the project.

Your signature below signifies approval of the submitted Report as a contract deliverable.

Anthony Meyer S&T/ED

Anthony Meyer, Project Monitor

9/5/85

Date

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MEMORANDUM

November 25, 1985

TO: Anthony Meyer, S&T/ED
FROM: *J* Judy Brace, Clearinghouse on Development Communication
SUBJECT: Clearinghouse Quarterly Report

Attached you will find the first Quarterly Report of the Clearinghouse's second year under contract: DPE-C-00-4066-00. Quarterly Reports are among the deliverables of the project.

Your signature below signifies approval of the submitted Report as a contract deliverable.



Anthony Meyer, Project Monitor

12/2/85

Date

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MEMORANDUM

March 6, 1986

TO: Anthony Meyer, S&T/ED
FROM: *JB* Judy Brace, Clearinghouse on Development Communication
SUBJECT: Clearinghouse Quarterly Report

Attached you will find the second Quarterly Report of the Clearinghouse's second year under contract: DPE-C-00-4066-00. Quarterly Reports are among the deliverables of the project.

Your signature below signifies approval of the submitted Report as a contract deliverable.

AM

Anthony Meyer, Project Monitor
S&T/ED

3/19/86

Date

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MEMORANDUM

May 30, 1986

TO: Anthony Meyer, S&T/ED
FROM: *JB* Judy Brace, Clearinghouse on Development Communication
SUBJECT: Clearinghouse Quarterly Report

Enclosed you will find the third Quarterly Report of the Clearinghouse's second year under contract: DPE-1231-C-00-4066-00.

The Report describes briefly the activities of the Clearinghouse in the fulfillment of its contractual services and deliverables.

Attached you will find meetings' agenda, copies of Project Monitor approvals, a copy of the newsletter produced within this quarter, subscription data, the revised publications and audiovisuals lists, and a set of recently published Project Profiles.

Your signature below signifies approval of the submitted Report as a contract deliverable.

AM

Dr. Anthony Meyer, Project Monitor

6/3/86

Date

85, Excellent summary at front end of report.

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MEMORANDUM

September 16, 1985

TO: Anthony Meyer, S&T/ED
FROM: *Judy* Judy Brace, Clearinghouse on Development Communication
SUBJECT: Clearinghouse Semi-annual Workplan

Attached you will find the third Semi-annual Workplan of Clearinghouse contract: DPE-1231-c-00-4066-00. Semi-annual Workplans are among the deliverables of the project. This Workplan covers the period of September 1985 - February 1986.

Your signature below signifies approval of the submitted Report as a contract deliverable.

Anthony Meyer S&T/ED

Anthony Meyer, Project Monitor

9/20/85

Date

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Clearinghouse on
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MEMORANDUM

August 26, 1986


TO: Anthony Meyer, S&T/ED
FROM: *JB* Judy Brace, Clearinghouse on Development Communication
SUBJECT: Clearinghouse Semi-annual Workplan

Attached you will find the fifth Semi-annual Workplan of Clearinghouse contract: DPE-1231-C-4066-00. Semi-annual Workplans are among the deliverables of the project. This workplan covers the period of September 1986 through February 1987.

Your signature below signifies approval of the submitted Workplan as a contract deliverable.



Anthony Meyer, Project Monitor



Date

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MEMORANDUM

September 16, 1985

TO: Anthony Meyer, S&T/ED
FROM: *JB* Judy Brace, Clearinghouse on Development Communication
SUBJECT: Clearinghouse Annual Report

Attached you will find the first Annual Report of Clearinghouse contract: DPE-1231-c-00-4066-00. Annual Reports are among the deliverables of the project. This Report covers the period of September 1, 1984 - August 31, 1985.

Your signature below signifies approval of the submitted Report as a contract deliverable.

Anthony Meyer

Anthony Meyer, Project Monitor

AT/ED

Date *9/20/85*

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AGENDA

Monthly S&T/ED-Clearinghouse Staff Meeting

Thursday, October 31, 1985, 2 PM

AED Offices

- Costs associated with Radio Education packets! production (25 remaining)
- Slidetape deliverables, as per contract (Radio Math slidetape update)
- Feedback on monthly provision of current journals in Reading Room
- DCR flag and format changes
- Final run down on Health issue re: # of copies, Mission insert
- DCR #52 preliminary discussion
- Current status of photos & text for AID wall
- Clearinghouse cooperation with Radio Diffusion activities
- Two new Health Communication videos in Clearinghouse
- Year of the Magic Bullet

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AGENDA

Monthly S&T/ED-Clearinghouse Staff Meeting

Tuesday, January 7, 1986, 9am

AED Offices

- o Growth chart
- o Preparations for Agricultural Mailing to Ag Officers
- o Dialogue on Diarrhoea material for DCR
- o Letter from Primus
- o DCR #52



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AGENDA

Monthly S&T/ED-Clearinghouse Staff Meeting

Wednesday, February 12, 1986, 3 PM

AED Offices

- Budget issues
- DCR #52 status
- Progress on DCR calendar
- Earle Lawrence monograph plans
- Agricultural Mission mailout
- AID Staffing Patterns

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AGENDA

Monthly S&T/ED-Clearinghouse Staff Meeting

Tuesday, March 25, 1986, 3 PM

AED Offices

- DCR
 - #53 Spring issue progress report
 - Reader Survey as per D/D example
 - Promo mailing to other communication publications
 - Response from editors of health publications
- Other Deliverables
 - Project Profiles
 - Memo to Tony on IRI tapes
 - Semi-annual Workplan
- Outreach/subscription activities
 - CIAT letter
 - The perfect International Education journal
- Ag. mailing progress
- Renting out mailing list to World Bank Publications Dept.



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AGENDA

Monthly S&T/ED-Clearinghouse Staff Meeting

Wednesday, May 28, 1986, 2 PM

AED Offices

- DCR
 - #54 Summer issue progress report
 - Response from readers of health publications
- Other Deliverables
 - Project Profiles update to missions
 - Agricultural Communications and Radio Project Profiles
 - Quarterly Report
- Participation at annual SID/Washington Conference
- Summer intern



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AGENDA

Monthly S&T/ED-Clearinghouse Staff Meeting

Tuesday, July 8, 1986, 11 AM

AED Offices

- DCR progress report
- Transfer of mailing list in-house
- APHA Conference
- Receipt of first shipment of RADECO tapes from the DR
- Pakistan drug information activity (how CDC influences project design)
- Project Profiles mailing to AID Missions
- Spanish translation of first 8 Profiles of the current contract
- Profiles in progress
- Contract extension strategy



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AGENDA

Monthly S&T/ED - Clearinghouse Staff Meeting

Thursday, August 21, 1986, 2 PM

AED Offices

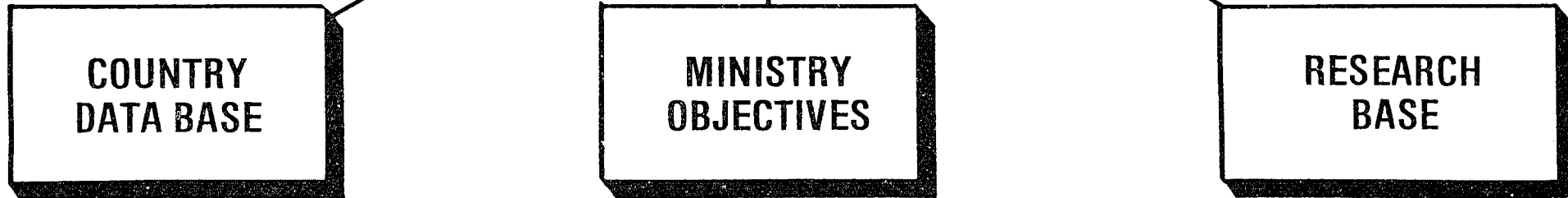
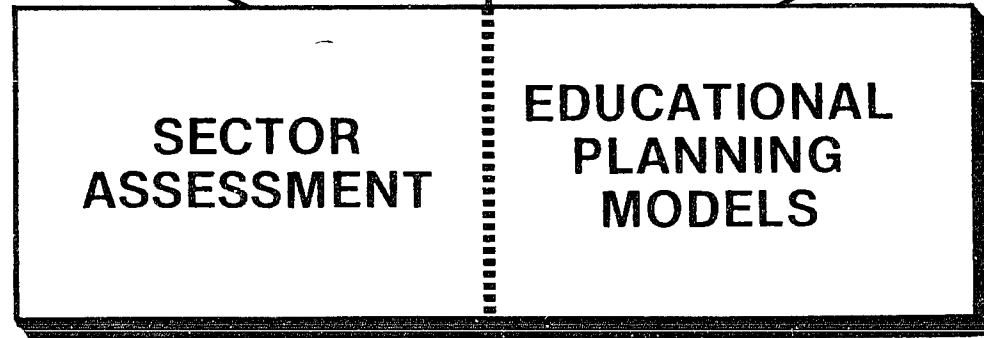
- 6 - month CDC workplan
- Interactive radio programs archiving
- Condition of the wall?
- Feedback from DCR mission inserts?
- New AID mission mailing?
- DCR outreach efforts
- Calendar ideas for Fall DCR issue #55
- DCR #55 progress

**STRATEGIES FOR PLANNING EFFECTIVE
EDUCATIONAL DEVELOPMENT (SPEED):
EDUCATIONAL SECTOR STRATEGY BUILDING**

DISSEMINATION



INTEGRATION

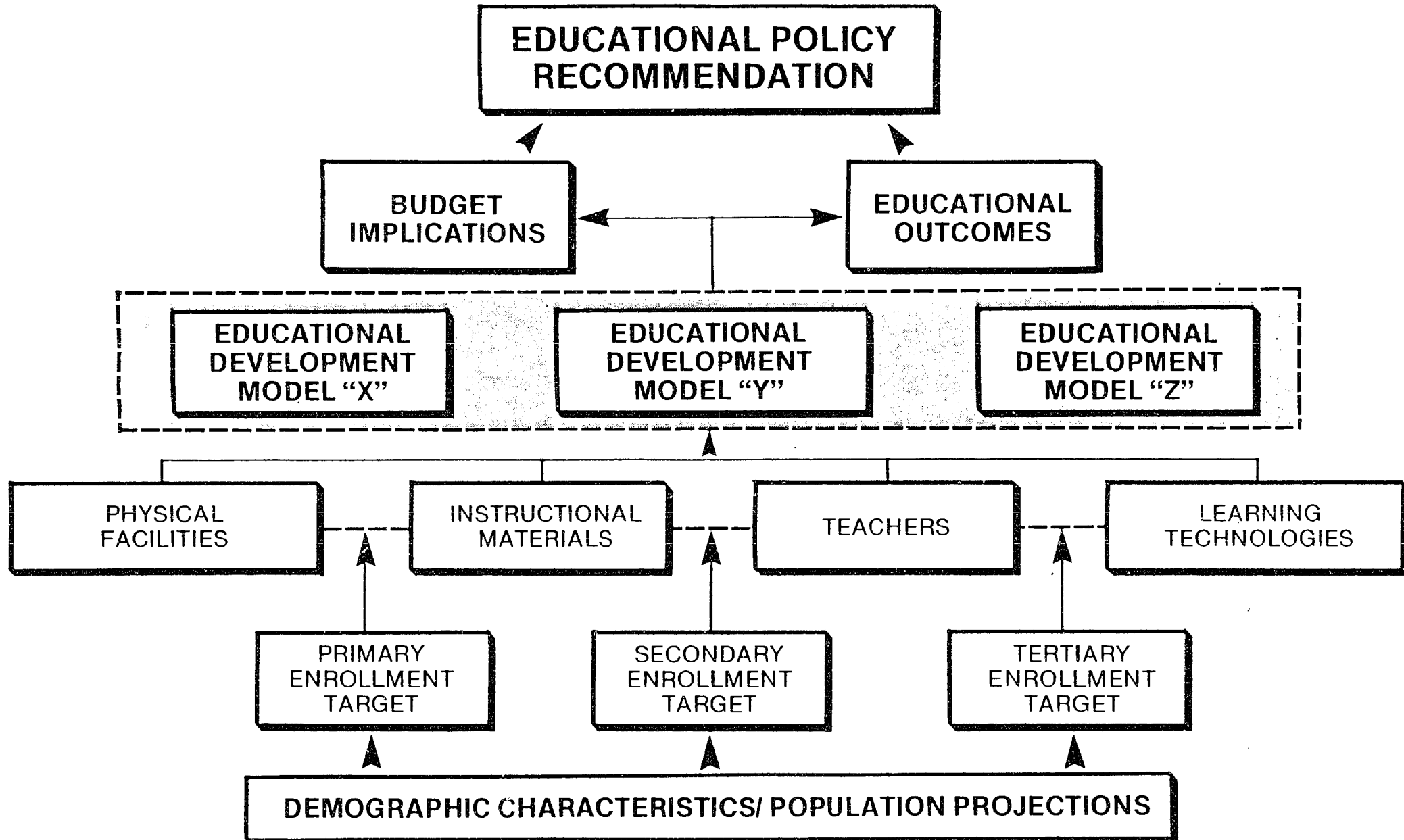


KNOWLEDGE BUILDING

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STRATEGIES FOR PLANNING EFFECTIVE EDUCATIONAL DEVELOPMENT (SPEED):

HIERARCHY OF PLANNING CONSIDERATIONS IN FORMULATING EDUCATION SECTOR STRATEGIES



MACRO VIEW
(000's)

	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
FORMAL EDUCATION	50,687 (44.6%)	44,373 (23.8%)	95,060 (31.7%)	23,356 (20.8%)	33,414 (20.9%)	56,770 (20.9%)
VOC./TECH. EDUCATION	17,482 (15.4%)	18,277 (9.8%)	35,759 (11.9%)	4,360 (3.9%)	5,700 (3.6%)	10,060 (3.7%)
PARTICIPANT TRAINING	39,026 (34.3%)	77,531 (41.6%)	116,557 (38.8%)	59,975 (53.4%)	81,230 (50.8%)	141,205 (51.9%)
LABOR DEVELOPMENT	2,483 (2.2%)	16,968 (9.1%)	19,451 (6.5%)	3,414 (3.1%)	14,256 (8.9%)	17,670 (6.5%)
OTHER	4,000 (3.5%)	29,416 (15.8%)	33,416 (11.1%)	21,250 (18.9%)	25,232 (15.8%)	46,482 (17.1%)
TOTAL	113,678	186,565	300,243	112,355	159,832	272,187

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MICRO VIEW: AFRICA
(000's)

<u>AFRICA</u>	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
FORMAL EDUCATION	5,687 (24.4%)	6,497 (18.3%)	12,184 (20.7%)	3,356 (18.3%)	11,660 (22.3%)	15,016 (21.3%)
VOC./TECH. EDUCATION	6,107 (26.2%)	3,000 (8.5%)	9,107 (15.5%)	4,360 (23.8%)	3,000 (5.7%)	7,360 (10.4%)
PARTICIPANT TRAINING	10,526 (45.1%)	18,369 (51.9%)	28,895 (49.2%)	9,100 (49.7%)	28,456 (54.4%)	37,556 (53.2%)
LABOR DEVELOPMENT	993 (4.3%)	4,221 (11.9%)	5,214 (8.9%)	1,500 (8.2%)	3,500 (6.7%)	5,000 (7.1%)
OTHER	----- -----	3,332 (9.4%)	3,332 (5.7%)	----- -----	5,667 (10.8%)	5,667 (8%)
TOTAL	23,313	35,419	58,732	18,316	52,283	70,599

MICRO VIEW: LATIN AMERICA & CARIBBEAN
(000's)

	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
<u>LATIN AMERICA & CARIBBEAN</u>						
FORMAL EDUCATION	----- -----	30,522 (28.3%)	30,522 (25.4%)	----- -----	21,030 (26.7%)	21,030 (19.5%)
VOC./TECH. EDUCATION	11,000 (88%)	7,996 (7.4%)	18,996 (15.8%)	----- -----	2,600 (3.3%)	2,600 (2.4%)
PARTICIPANT TRAINING	----- -----	47,154 (43.7%)	47,154 (39.2%)	27,000 (93.4%)	39,397 (50.1%)	66,397 (61.7%)
LABOR DEVELOPMENT	1,490 (12%)	8,000 (7.4%)	9,490 (7.9%)	1,914 (6.6%)	6,156 (7.8%)	8,070 (7.5%)
OTHER	----- -----	14,150 (13.1%)	14,150 (11.8%)	----- -----	9,542 (12.1%)	9,542 (8.9%)
TOTAL	12,490	107,822	120,312	28,914	78,725	107,639

MICRO VIEW: ASIA/NEAR EAST
(000's)

<u>ASIA/NEAR EAST</u>	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
FORMAL EDUCATION	45,000 (57.8%)	6,854 (25.8%)	51,854 (49.7%)	20,000 (30.7%)	724 (3.8%)	20,724 (24.6%)
VOC./TECH. EDUCATION	375 (.5%)	486 (1.8%)	861 (.8%)	----- -----	100 (.5%)	100 (.1%)
PARTICIPANT TRAINING	28,500 (36.6%)	9,603 (36.2%)	38,103 (36.5%)	23,875 (36.7%)	11,000 (57.8%)	34,875 (41.4%)
LABOR DEVELOPMENT	----- -----	4,100 (15.4%)	4,100 (3.9%)	----- -----	3,900 (20.5%)	3,900 (4.6%)
OTHER	4,000 (5.1%)	5,474 (20.6%)	9,474 (9.1%)	21,250 (32.6%)	3,300 (17.3%)	24,550 (29.2%)
TOTAL	77,875	26,517	104,392	65,125	19,024	85,149

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NUMBER OF PROJECTS & DOLLAR AMOUNTS PER COUNTRY (000's)
 (only projects for which funds were actually spent or estimated are considered)

FORMAL EDUCATION

	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
AFRICA						
BOTSWANA	2 (5,687)	-----	2 (5,687)	1 (3,356)	-----	1 (3,356)
CAMEROON	-----	1 (5,500)	1 (5,500)	-----	1 (10,460)	1 (10,460)
SWAZILAND	-----	1 (977)	1 (977)	-----	1 (1,200)	1 (1,200)
SUBTOTAL	2 (5,687)	2 (6,497)	4 (12,184)	1 (3,356)	2 (11,660)	3 (15,016)
ASIA/NEAR EAST						
EGYPT	-----	-----	-----	1 (20,000)	-----	1 (20,000)
JORDAN	1 (30,000)	-----	1 (30,000)	-----	-----	-----
NEPAL	-----	2 (1,243)	2 (1,243)	-----	2 (724)	2 (724)
OMAN	1 (15,000)	-----	1 (15,000)	-----	-----	-----
YEMEN	-----	1 (4,761)	1 (4,761)	-----	-----	-----
NEAR EAST REGIONAL	-----	1 (850)	1 (850)	-----	-----	-----
SUBTOTAL	2 (45,000)	4 (6,854)	6 (51,854)	1 (20,000)	2 (724)	3 (20,724)
LAT.AMERICA/CARIBBEAN						
DOMINICAN REPUBLIC	-----	1 (2,849)	1 (2,849)	-----	-----	-----
EL SALVADOR	-----	1 (8,725)	1 (8,725)	-----	1 (15,200)	1 (15,200)
GUATEMALA	-----	1 (12,000)	1 (12,000)	-----	-----	-----
HAITI	-----	-----	-----	-----	1 (1,200)	1 (1,200)
HONDURAS	-----	1 (3,600)	1 (3,600)	-----	1 (3,600)	1 (3,600)
JAMAICA	-----	1 (3,000)	1 (3,000)	-----	1 (1,000)	1 (1,000)
L.A. REGIONAL	-----	1 (348)	1 (348)	-----	1 (30)	1 (30)
SUBTOTAL	-----	6 (30,522)	6 (30,522)	-----	5 (21,030)	5 (21,030)

(cont.)

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	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
S&T EDUCATION	----	<u>1 (500)</u>	<u>1 (500)</u>	----	----	----
SUBTOTAL	---	1 (500)	1 (500)	---	---	---
GRAND TOTAL	4 (50,687)	13 (44,373)	17 (95,060)	2 (23,356)	9 (33,414)	11 (56,770)

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NUMBER OF PROJECTS & DOLLAR AMOUNTS PER COUNTRY (000's)
 (only projects for which funds were actually spent are considered)

VOCATIONAL/TECHNICAL EDUCATION

	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
AFRICA						
BOTSWANA	1 (4,313)	-----	1 (4,313)	2 (3,200)	-----	2 (3,200)
SOUTH AFRICA REG'L	<u>1 (1,794)</u>	<u>1 (3,000)</u>	<u>2 (4,794)</u>	<u>1 (1,160)</u>	<u>1 (3,000)</u>	<u>2 (4,160)</u>
SUBTOTAL	2 (6,107)	1 (3,000)	3 (9,107)	3 (4,360)	1 (3,000)	4 (7,360)
ASIA/NEAR EAST						
LEBANON	1 (375)	-----	1 (375)	-----	-----	-----
SRI LANKA	-----	1 (200)	1 (200)	-----	1 (100)	1 (100)
NEAR EAST REG'L	-----	<u>1 (286)</u>	<u>1 (286)</u>	-----	-----	-----
SUBTOTAL	1 (375)	2 (486)	3 (861)	-----	1 (100)	1 (100)
LAT.AMERICA /CARIBBEAN						
BELIZE	-----	1 (2,000)	1 (2,000)	-----	1 (500)	1 (500)
DOMINICAN REPUBLIC	-----	1 (400)	1 (400)	-----	-----	-----
ECUADOR	-----	1 (188)	1 (188)	-----	1 (1,000)	1 (1,000)
JAMAICA	-----	2 (1,530)	2 (1,530)	-----	2 (600)	2 (600)
PERU	-----	1 (180)	1 (180)	-----	-----	-----
ROCAP REG'L	1 (11,000)	-----	1 (11,000)	-----	-----	-----
CARIB. REG'L	-----	1 (3,200)	1 (3,200)	-----	-----	-----
LAC REG'L	-----	<u>1 (498)</u>	<u>1 (498)</u>	-----	<u>1 (500)</u>	<u>1 (500)</u>
SUBTOTAL	1 (11,000)	8 (7,996)	9 (18,996)	-----	5 (2,600)	5 (2,600)
FFP & VOL. ASSIS.						
PVT./VOL. COOP.	-----	<u>1 (6,795)</u>	<u>1 (6,795)</u>	-----	-----	-----
SUBTOTAL	-----	1 (6,795)	1 (6,795)	-----	-----	-----
GRAND TOTAL	4 (17,482)	12 (18,277)	16 (35,759)	3 (4,360)	7 (5,700)	10 (10,060)

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NUMBER OF PROJECTS & DOLLAR AMOUNTS PER COUNTRY (000's)
 (only projects for which funds were actually spent or estimated are considered)

PARTICIPANT TRAINING

	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
AFRICA						
BURUNDI	----	----	----	----	1 (1,000)	1 (1,000)
DJIBOUTI	1 (1,400)	----	1 (1,400)	1 (400)	----	1 (400)
GUINEA-BISSAU	----	1 (500)	1 (500)	----	----	----
KENYA	----	----	----	----	1 (2,000)	1 (2,000)
LIBERIA	----	1 (594)	1 (594)	----	2 (1,500)	2 (1,500)
LESOTHO	----	2 (3,155)	2 (3,155)	----	1 (5,138)	1 (5,138)
SOMALIA	----	1 (2,700)	1 (2,700)	----	1 (2,000)	1 (2,000)
SWAZILAND	----	1 (3,000)	1 (3,000)	----	1 (3,240)	1 (3,240)
ZAMBIA	1 (3,000)	----	1 (3,000)	----	----	----
ZIMBABWE	1 (5,139)	----	1 (5,139)	----	1 (4,000)	1 (4,000)
AFRICA REG'L	<u>2 (987)</u>	<u>3 (8,420)</u>	<u>5 (9,407)</u>	<u>2 (8,700)</u>	<u>3 (9,578)</u>	<u>5 (18,278)</u>
SUBTOTAL	5 (10,526)	9 (18,369)	14 (28,895)	3 (9,100)	11 (28,456)	14 (37,556)
<u>ASIA/NEAR EAST</u>						
BURMA	----	----	----	----	1 (500)	1 (500)
CYPRUS	1 (7,500)	----	1 (7,500)	1 (7,178)	----	1 (7,178)
EGYPT	2 (9,000)	----	2 (9,000)	----	----	----
JORDAN	----	----	----	2 (3,000)	----	2 (3,000)
INDONESIA	----	1 (2,000)	1 (2,000)	----	----	----
LEBANON	1 (10,000)	----	1 (10,000)	1 (5,000)	----	1 (5,000)
MOROCCO	----	1 (1,800)	1 (1,800)	----	1 (1,900)	1 (1,900)
NEPAL	----	1 (250)	1 (250)	----	1 (500)	1 (500)
PAKISTAN	----	----	----	1 (5,000)	----	1 (5,000)
PORTUGAL	1 (2,000)	----	1 (2,000)	----	----	----
YEMEN	----	1 (5,078)	1 (5,078)	----	1 (7,500)	1 (7,500)
ASIA/NEAR EAST REG'L	----	1 (100)	1 (100)	2 (3,697)	1 (100)	3 (3,797)
SOUTH PACIFIC REG'L	----	1 (375)	1 (375)	----	1 (500)	1 (500)
SUBTOTAL	5 (28,500)	6 (9,603)	11 (38,103)	6 (23,875)	6 (11,000)	12 (34,875)

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(PARTICIPANT TRAINING cont.)

	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
<u>LAT.AMERICA/CARIBBEAN</u>						
BOLIVIA	----	2 (1,000)	2 (1,000)	----	2 (810)	2 (810)
COSTA RICA	----	1 (3,650)	1 (3,650)	----	1 (500)	1 (500)
DOMINICAN REPUBLIC	----	1 (3,889)	1 (3,889)	----	3 (3,381)	3 (3,381)
ECUADOR	----	----	----	----	2 (2,870)	2 (2,870)
GUATEMALA	----	2 (1,117)	2 (1,117)	----	1 (5000)	1 (5000)
HAITI	----	1 (450)	1 (450)	----	1 (800)	1 (800)
JAMAICA	----	1 (350)	1 (350)	----	----	----
PERU	----	2 (1,739)	2 (1,739)	----	2 (2,250)	2 (2,250)
CARIBBEAN REG'L	----	2 (1,394)	2 (1,394)	----	2 (6,000)	2 (6,000)
CENTRAL AMER. REG'L	----	1 (27,550)	1 (27,550)	1 (27,000)	1 (10,000)	2 (37,000)
LAC REG'L	----	3 (6,015)	3 (6,015)	----	2 (5,386)	2 (5,386)
ROCAP	----	----	----	----	1 (2,400)	1 (2,400)
SUBTOTAL	----	16 (47,154)	16 (47,154)	1 (27,000)	18 (39,397)	19 (66,397)
<u>S&T</u>						
EDUCATION	----	3 (1,400)	3 (1,400)	----	3 (1,452)	3 (1,452)
INT'L TRNG.	----	----	----	----	1 (500)	1 (500)
RURAL & INST'L	----	1 (675)	1 (675)	----	1 (125)	1 (125)
SUBTOTAL	----	4 (2,075)	4 (2,075)	----	5 (2,077)	5 (2,077)
<u>FFP & VOL. ASSIS.</u>						
PVT./VOL. COOP.	----	1 (330)	1 (330)	----	1 (300)	1 (300)
SUBTOTAL	----	1 (330)	1 (330)	----	1 (300)	1 (300)
GRAND TOTAL	10 (39,026)	36 (77,531)	46 (116,557)	10 (59,975)	41 (81,230)	51 (141,205)

NUMBER OF PROJECTS & DOLLAR AMOUNTS PER COUNTRY (000's)
 (only projects for which funds were actually spent or estimated are considered)

LABOR DEVELOPMENT

	<u>1985 ACTUAL</u>			<u>1986 ESTIMATE</u>		
	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>	<u>ESF</u>	<u>DA</u>	<u>TOTAL</u>
<u>AFRICA</u>						
AFRICA REG'L	<u>1 (993)</u>	<u>1 (4,221)</u>	<u>2 (5,214)</u>	<u>1 (1,500)</u>	<u>1 (3,500)</u>	<u>2 (5,000)</u>
SUBTOTAL	1 (993)	1 (4,221)	2 (5,214)	1 (1,500)	1 (3,500)	2 (5,000)
<u>ASIA/NEAR EAST</u>						
ASIA REG'L	----	<u>1 (4,100)</u>	<u>1 (4,100)</u>	----	<u>1 (3,900)</u>	<u>1 (3,900)</u>
SUBTOTAL	—	1 (4,100)	1 (4,100)	—	1 (3,900)	1 (3,900)
<u>LAT.AMERICA/CARIBBEAN</u>						
LAC REGIONAL	<u>1 (1,490)</u>	<u>1 (8,000)</u>	<u>2 (9,490)</u>	<u>1 (1,914)</u>	<u>1 (6,156)</u>	<u>2 (8,070)</u>
SUBTOTAL	1 (1,490)	1 (8,000)	2 (9,490)	1 (1,914)	1 (6,156)	2 (8,070)
<u>S&T</u>						
INT'L TRNG.	----	<u>1 (647)</u>	<u>1 (647)</u>	----	<u>1 (700)</u>	<u>1 (700)</u>
SUBTOTAL	—	1 (647)	1 (647)	—	1 (700)	1 (700)
GRAND TOTAL	2 (2,483)	4 (16,968)	6 (19,451)	2 (3,414)	4 (14,256)	6 (17,670)

NUMBER OF PROJECTS & DOLLAR AMOUNTS PER COUNTRY (000's)
 (only projects for which funds were actually spent or estimated are considered)

	<u>OTHER</u>					
	<u>1985 ACTUAL</u>		<u>TOTAL</u>	<u>1986 ESTIMATE</u>		<u>TOTAL</u>
	<u>ESF</u>	<u>DA</u>		<u>ESF</u>	<u>DA</u>	
<u>AFRICA</u> -----	-----	-----	-----	-----	-----	-----
<u>ASIA/NEAR EAST</u>						
AFGHANISTAN	-----	-----	-----	1 (3,250)	-----	1 (3,250)
EGYPT	<u>1 (4,000)</u>	-----	-----	<u>1 (18,000)</u>	-----	<u>1 (18,000)</u>
SUBTOTAL	1 (4,000)	-----	-----	2 (21,250)	-----	2 (21,250)
<u>LAC</u> -----	-----	-----	-----	-----	-----	-----
GRAND TOTAL	1 (4,000)	-----	-----	2 (21,250)	-----	2 (21,250)

MICRO VIEW: S&T
(000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>S&T</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	500 (6%)	----- -----
VOC./TECH. EDUCATION	----- -----	----- -----
PARTICIPANT TRAINING	2,075 (25.6%)	2,077 (26.6%)
LABOR DEVELOPMENT	647 (8%)	700 (8.9%)
OTHER	4,860 (60.1%)	5,023 (64.3%)
TOTAL	8,082	7,800

2009

MICRO VIEW: FFP & VOLUNTARY ASSIS.
(000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>FFP & VOL. ASSIS.</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	----- -----	----- -----
VOC./TECH. EDUCATION	6,795 (90.9%)	----- -----
PARTICIPANT TRAINING	330 (4.4%)	300 (27.2%)
LABOR DEVELOPMENT	----- -----	----- -----
OTHER	347 (4.6%)	800 (72.7%)
TOTAL	7,472	1,100

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MICRO VIEW: PROGRAM & POLICY COORDINATION
(000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>PROG. & POL. COORD.</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	----	----
VOC./TECH. EDUCATION	----	----
PARTICIPANT TRAINING	----	----
LABOR DEVELOPMENT	----	----
OTHER	1,253 <u>(100%)</u>	900 <u>(100%)</u>
TOTAL	1,253	900

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MICRO VIEW: PRIVATE ENTERPRISE
(000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>PVT. ENT.</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	----	----
VOC./TECH. EDUCATION	----	----
PARTICIPANT TRAINING	----	----
LABOR DEVELOPMENT	----	----
OTHER	====	====
TOTAL	0	0

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MICRO VIEW: S&T
(000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>S&T</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	500 (6%)	----- -----
VOC./TECH. EDUCATION	----- -----	----- -----
PARTICIPANT TRAINING	2,075 (25.6%)	2,077 (26.6%)
LABOR DEVELOPMENT	647 (8%)	700 (8.9%)
OTHER	4,860 (60.1%)	5,023 (64.3%)
TOTAL	8,082	7,800

MICRO VIEW: FFP & VOLUNTARY ASSIS.
(000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>FFP & VOL. ASSIS.</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	----	----
VOC./TECH. EDUCATION	6,795 (90.9%)	----
PARTICIPANT TRAINING	330 (4.4%)	300 (27.2%)
LABOR DEVELOPMENT	----	----
OTHER	347 (4.6%)	800 (72.7%)
TOTAL	7,472	1,100

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MICRO VIEW: PROGRAM & POLICY COORDINATION
 (000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>PROG. & POL. COORD.</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	----	----
VOC./TECH. EDUCATION	----	----
PARTICIPANT TRAINING	----	----
LABOR DEVELOPMENT	----	----
OTHER	1,253 <u>(100%)</u>	900 <u>(100%)</u>
TOTAL	1,253	900

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MICRO VIEW: PRIVATE ENTERPRISE
(000's)

	<u>1985 ACTUAL</u>	<u>1986 ESTIMATE</u>
<u>PVT. ENT.</u>	<u>DA</u>	<u>DA</u>
FORMAL EDUCATION	----	----
VOC./TECH. EDUCATION	----	----
PARTICIPANT TRAINING	----	----
LABOR DEVELOPMENT	----	----
OTHER	====	====
TOTAL	0	0

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CLEARINGHOUSE ON DEVELOPMENT COMMUNICATION

AID/DD/1231-C-00-4066-00

4TH 6 MONTH WORKPLAN

MARCH - AUGUST 1986

ON-GOING CDC ACTIVITIES

3/8

<u>Month 19 - March</u>	<u>Month 20 - April</u>	<u>Month 21 - May</u>	<u>Month 22 - June</u>	<u>Month 23 - July</u>	<u>Month 24 - August</u>
Prepare and submit agenda for monthly management meeting with AID Monitor	X	X	X	X	X
Monthly management meeting with Project Monitor and CDC staff	X	X	X	X	X
Update Reading File	X	X	X	X	X
Select publications for display at AID Reading Rm.	X	X	X	X	X
Restock AID Reading Rm. at 1601 N. Kent St.	X	X	X	X	X
Continue regular info. activities: ref. services to AID, general info. requests, collection maintenance, materials acquisition, AV circulation, visitors' orientation	X	X	X	X	X
Continue updating AID sectors mailing list	X	X	X	X	X
Continue article development for Spring <u>DCR #53</u>	Communicate #53 copy and copy-edit Initial ideas re-searched for <u>DCR #54</u>	Layout, print, and distribute #53 Contact authors and develop articles for <u>DCR #54</u>	Continue #54 article development and preparation	Communicate #54 copy to typesetter Perform secondary editing	Paste-up, print, and distribute #54
Begin new <u>Project Profile</u> ; finish and send for review new PPs	X	X	X	X	X
Submit Quarterly Report		Print completed PPs	Distribute PPs	Submit Quarterly Report	Prepare and discuss Semi-Annual Workplan w/ Project Monitor

RADIO EDUCATION ACTIVITIES

19/3

<u>Month 19 - March</u>	<u>Month 20 - April</u>	<u>Month 21 - May</u>	<u>Month 22 - June</u>	<u>Month 23 - July</u>	<u>Month 24 - August</u>
Proceed with writing of modular Radio Education Handbook					
• Drafts from de Fossard edited by Edgerton	X	X	X	X	
• Drafts from Imhoof proceeding	X	X	X	X	
Negotiations on RADECO contribution to handbook					
Identify potential authors/ topics for educational radio articles, <u>DCR</u> 53, 54,55	X	X	X	X	X
Discuss possibility of 3 short audio tapes of interactive elements of Radio Math, RLAP, RADECO					
Collection of Radio <u>Project Profiles</u> mailed to readers	X	X	X	X	X
Respond to "Call for Radio Education Questions"	X	X	X	X	X
Monitor RADECO's reproduction of tapes and support materials for AID archives in CDC	X	X	X	X	X

OTHER CDC ACTIVITIES

320

Month 19 - March

Month 20 - April

Month 21 - May

Month 22 - June

Month 23 - July

Month 24 - August

Collection of Agriculture
Communications Project
Profiles mailed to readers

X

X

X

X

X

Mailing to Ag. Officers

CDC COST RECOVERY ACTIVITIES

123

Month 19 - March

Month 20 - April

Month 21 - May

Month 22 - June

Month 23 - July

Month 24 - August

Marketing activities

- Mailing to selected communication publications' editors, requesting that announcement on DCR availability be run in publication

- Add to mailing list new subscribers resulting from special announcements in education and health publications

X

X

X

X

X

Review potential cost-savings if mailing list done in-house

322

CLEARINGHOUSE ON DEVELOPMENT COMMUNICATION

AID/DD/1231-C-00-4066-00

FIFTH 6-MONTH WORKPLAN

SEPTEMBER 1986 — FEBRUARY 1987

323

<u>Month 25 - September</u>	<u>Month 26 - October</u>	<u>Month 27 - November</u>	<u>Month 28 - December</u>	<u>Month 29 - January</u>	<u>Month 30 - February</u>
Prepare and submit agenda for monthly management meeting with AID Monitor	X	X	X	X	X
Monthly management meeting w/ Project Monitor & CDC staff	X	X	X	X	X
Update Reading File	X	X	X	X	X
Restock publications display at S&T/ED	X	X	X	X	X
Continue regular info. activities: ref. services to AID, general info. requests, collection maintenance, materials acquisition, AV circulation, visitors' orientation	X	X	X	X	X
Continue updating AID sectors mailing list	X	X	X	X	X
Continue article development for Fall <u>DCR</u> #55 - special innovative print materials focus; prepare 1987 calendar for <u>DCR</u> #55	Edit & communicate <u>DCR</u> #55 copy	Layout, print, and distribute #55	Edit & communicate <u>DCR</u> #56 copy	Final edit, layout, print, & distribute <u>DCR</u> #56	Edit & prepare copy for typesetting for #57
Continue marketing paid <u>DCR</u> subscriptions	X	X	X	X	X
Begin new <u>Project Profile</u> ; finish and send for review new PPs	X	X	X	X	X
Respond to request from Missions for PPs	X	X	X	X	X
Submit Quarterly Report			Print completed PPs	Distribute PPs	
			Submit Quarterly Report	Prepare and discuss Semi-Annual Workplan w/ Project Monitor	

RADIO EDUCATION ACTIVITIES

H23

<u>Month 25 - September</u>	<u>Month 26 - October</u>	<u>Month 27 - November</u>	<u>Month 28 - December</u>	<u>Month 29 - January</u>	<u>Month 30 - February</u>
Proceed with preparation of modular Radio Education Handbook					
<ul style="list-style-type: none"> ● Drafts from de Fossard, Imhoof, and Edgerton to be edited 	X	X			
<ul style="list-style-type: none"> ● Negotiations for Friend's participation continuing 					
<ul style="list-style-type: none"> ● Friend's contributions proceeding 	X	X			
		<ul style="list-style-type: none"> ● Submit several modules for review 	X		
Identify potential authors/topics for educational radio articles, <u>DCR 55, 56, 57</u>	X	X	X	X	X
Proceeding with sample tape on RLAP interactive examples	X	X			
		<ul style="list-style-type: none"> ● Submission of draft tape 	X		
Collection of Radio <u>Project Profiles</u> mailed to readers	X	X	X	X	X
Respond to "Call for Radio Education Questions"	X	X	X	X	X
Organize RADECO's tapes and support materials for AID archives as they arrive in CDC	X	X	X		

OTHER CDC ACTIVITIES

Month 25 - September

Introduction to new CDC computer system & software for DCR mail list maintenance

Discuss other potential products with Project Monitor

Month 26 - October

Update mail list for DCR #55 label output

X

Month 27 - November

Generate labels for DCR #55

Month 28 - December

Continuing updating mail list

Month 29 - January

Generate labels for DCR #56

Month 25 - February

345

QUARTERLY REPORT

SEPTEMBER - NOVEMBER 1985

In the first quarter of the contract's second year, the Clearinghouse continued to provide the services and deliverables called for in the contract and the third six-month workplan.

Reading File

Monthly reading files to keep the AID Project Monitor informed of selected requests for information were compiled for September, October, and November. These were circulated in S&T/ED and returned to the Clearinghouse files.

Meetings

A monthly meeting with the Project Monitor was held in October this quarter. (See attached agenda.) Travel, and other contractual responsibilities precluded some monthly meetings.

Development Communication Report

DCR #50 was published and distributed in September 1985. A special supplement was designed and inserted in #50 for USAID Missions. It focused on integrating interactive radio activities into their region's educational system.

A Clearinghouse "brain storming" session with AID and AED staff was held on September 19, 1985 to generate ideas on how to improve the newsletter and expand its audience.

A new masthead and revised format of the newsletter were developed with a graphic artist.

A special "child survival" health issue (#51) was planned, prepared, and sent to the printers.

Another special supplement for USAID Missions focusing on AID child survival programs was designed for insertion in #51.

Library/Reference Services

During the past quarter, the Clearinghouse has received 37 visitors, assisting them in orientation to the collection and in identifying appropriate materials for their specific research needs. Some of these visitors included a senior research associate from the National Institute of Education, an economist from the International Telecommunication Union, a project director from the Liberia Rural Communications Network, several researchers from Intelsat, and the director of Somali Broadcasting of the Somalian Ministry of Information. Many university students and several professors also came to do research in the Clearinghouse resource collection.

During this period, the Clearinghouse kept its serial collection up-to-date by subscribing to new and relevant periodicals in the field of communications for development. Some of the more notable new subscriptions are:

- Educational Technology Abstracts
- Telecommunication Journal
- Programmed Learning & Educational Technology
- Thai Development Newsletter
- Information Development
- Reseau-Technologie et Developpement
- TechTrends

Acquisition of new and relevant published and unpublished documents, reports, papers, and books related to development communication, to keep the collection current and relevant, has proceeded at a steady pace.

Information requests from AID/Washington and USAID Missions personnel continued throughout the quarter. Requests for information answered: USAID/Ouagadougou on rural radio for health education; USAID/New Delhi on radio broadcasting for development and for S&T/ED radio education package; and USAID/Kigali on radio message delivery in family planning and other areas.

Project Profiles

Three Project Profiles were completed and printed during the fifth quarter.

Other Contract Deliverables

The fourth Quarterly Report was submitted and approved during the first quarter as a contract deliverable (see attached).

The third six-month workplan (September 1985 - February 1986) was submitted, revised, and approved by the Project Monitor as a contract deliverable.

The Clearinghouse's first Annual Report was submitted and approved at the beginning of the quarter.

Clipping Service

The Clipping Service has, during this quarterly period, evolved into a different kind of service. Through discussion with the Project Monitor, it was decided that instead of providing a selection of xeroxed periodical articles for circulation in S&T/ED offices, each month a selection of relevant periodicals would be provided under plastic protective cover. These are located in the AID Development Communication Reading Room. They will be updated each month.

Radio Education Activities

The Clearinghouse has been working closely with EDC and other participants to get the Radio Diffusion Project underway. This included providing names for a network mailing list. The Radio Education package was sent out to education specialists who attended the Moton Conference on Education for Developing Countries, and to others in the field of education, as specified by the Project Monitor and S&T/ED personnel.

Display Wall at S&T/ED

Text boards and photos of S&T/ED projects/activities were hung on a freshly painted wall in the S&T/ED offices in Rosslyn at the end of the quarter.

Reading Room

During the past quarter, the AID/Development Communication Reading Room has been restocked with CDC publications, current periodicals on a monthly basis (Clipping Service), and provided with a visitors' sign-in book, lectern, and desk lamp for the use of visitors to S&T/ED.

QUARTERLY REPORT

DECEMBER 1985 - FEBRUARY 1986

In the second quarter of the contract's second year, the Clearinghouse continued to provide the services and deliverables called for in the contract and the third six-month workplan.

Reading File

Monthly reading files to keep the AID Project Monitor informed of selected requests for information were compiled for December/January and February. These were circulated in S&T/ED and returned to the Clearinghouse files.

Meetings

Monthly meetings with the Project Monitor were held in January and February. Matters pertaining to the overall performance of the Clearinghouse were discussed at the meetings and then pursued.

Development Communication Report

DCR #51, a special health issue, was printed and distributed in December 1985; 1800 copies were distributed beyond the regular subscription mailing, including those made available at the ICORT II Conference. (See attached)

DCR #52 was completed and distributed this quarter, with the 1986 Clearinghouse calendar insert. (See attached)

Authors and topics are being selected for #53, which will feature a special section on video uses in developing countries with Diana Talbert as coordinating editor for this section.

The DCR is now displayed in the reception area of the Academy and copies are made available to visitors.

Subscription Data

During the past three months, DCR added 208 new subscribers to its mailing list. Weekly monitoring of subscription data was implemented for inclusion in the Weekly Project Update. Since that time (early February), there have been 30 new developing countries subscriptions, 16 new paid subscriptions, and 56 paid renewals. (See attached)

Library/Reference Services

During the past quarter, the Clearinghouse library received 14 visitors. They were oriented to the collection and assisted in identifying appropriate materials for their specific research needs. Some of these visitors included:

- Dr. Lachman Khurchandani
Center for
Communication
Studies; India
- Susan Goodwin
Project Director,
Institute for Policy
Studies

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- Nedra Huggins-Williams AID Desk
Officer/Somalia
- Veronica John International Law
Institute
- Daniel Henrich Handclasp
International
- Elaine Arnold Radio Nederland
- Leonel Valdivia Development
Associates

During this period, the Clearinghouse kept its serials collection up-to-date by adding new, relevant periodicals in appropriate fields. These include:

- Background Notes
- Educational Technology Abstracts
- Technology Journal

Acquisition of published and unpublished documents, reports, papers, and books to keep the collection current and relevant, has proceeded at a steady pace. Some 200 documents (including periodicals) are received monthly.

Information requests from AID/Washington and USAID Mission personnel continued throughout the quarter. Some of these were from:

- Duncan Miller, REDSO/WA, USAID/Abidjan, for Project Profiles in French and English
- Frank Fairchild, USAID/Guatemala, for a list of selected adult education equivalency projects
- USAID/Belize City for DCR subscription, films, and Project Profiles.

Project Profiles

The Clearinghouse is currently awaiting the return of the four draft Project Profiles that were sent to be reviewed by their respective project contact people.

Compilations of Project Profiles on agricultural communications and on radio-based projects were prepared, and an announcement in DCR makes them available to readers of DCR.

Other Contract Deliverables

The fifth Quarterly Report was submitted and approved during the second quarter as a contract deliverable (see attached).

A draft of the fourth six-month workplan (March - August 1986) was submitted to the Project Monitor for comments.

Radio Education Activities

The Clearinghouse Director participated in the RADECO project's International Conference on Radio Basic Education in Santo Domingo, 2-8 December 1985.

The Clearinghouse held discussions with the Radio Learning Project on cooperative activities and scheduled a meeting with Beatrice Andrews on InterAmerica's anticipated contributions to the handbook.

The Clearinghouse reproduced videos of Radio Math, RLAP, and RADECO projects for the Radio Learning Project, and reproduced various scripts and corresponding cassette recordings of RLAP lessons for tests/demonstrations in Swaziland.

Reading Room

During the past quarter, the AID/Development Communication Reading Room has been restocked with CDC publications and current selected publications on a monthly basis (former Clipping Service).

Marketing Efforts

Letters and announcements were sent to selected educational journals to offer DCR #49 and to selected health publications to offer DCR #51 to their readership. (See attached)

Miscellaneous

The Clearinghouse is compiling a mailing list of USAID Mission Agricultural Development Officers which will be used for a planned mailing of agricultural communication materials.

During this past quarter, the Project Monitor requested that the Clearinghouse provide him with a Weekly Project Update to facilitate the monitoring function. This describes the weekly project deliverable activities of the Clearinghouse.

QUARTERLY REPORT

MARCH - MAY 1986

In the third quarter of the contract's second year, the Clearinghouse continued to provide the services and deliverables called for in the contract and the fourth six-month workplan.

Reading File

Monthly reading files to keep the AID Project Monitor informed of selected requests for information were compiled for March, April, and May. These were circulated in S&T/ED and returned to the Clearinghouse files.

Meetings

Monthly meetings with the Project Monitor were held in March and May. Matters pertaining to the overall performance of the Clearinghouse were discussed at the meetings and then pursued (see attached).

Development Communication Report

DCR #53 was completed and distributed this quarter. It contains a special section on video use in developing countries for which Diana Talbert served as Contributing Editor (see attached).

Authors and topics are being selected for #54. A DCR index is being prepared for inclusion in #54.

Subscription Data

During the past three months, DCR added 97 new developing country (no charge) subscriptions, 23 new paid subscriptions, and 60 paid renewals (see attached).

Library/Reference Services

During the past quarter, the Clearinghouse library received 24 visitors. They were oriented to the collection and assisted in identifying appropriate materials for their specific research needs. Some of these visitors included:

- Joan Romeo (U.S.) Clearinghouse on Audiovisual Resources
- Mary Whittington (U.S.) Researcher, Bonnie Cain & Associates
- Sidney Moore and Richard Gilluly (U.S.) Writer and Research Assistant Population Information Program
- Diane de Terra (U.S.) Consultant, Institute for Development Anthro.
- Galal el Rashidi (Egypt) Director, I.E.C. Centre

During this period, the Clearinghouse kept its serials collection up-to-date by adding new, relevant periodicals in appropriate fields. These include:

- **Advanced Technology Alert System**
- **Bulletin of the International Bureau of Education**
- **Educational Technology Research**
- **Electronic Learning**
- **International Journal of Educational Development**
- **Nutrition News**
- **Open Learning**
- **World Development**

Acquisition of published and unpublished documents, reports, papers, and books to keep the collection current has proceeded at a steady pace.

Project Profiles

The Clearinghouse printed four Project Profiles this quarter. These include:

- Achikumbi Program, Malawi
- Developing Countries Farm Radio Network, Canada
- National Control of Diarrheal Diseases Project: ORT Communication Campaign, Egypt
- Project IMPACT, Philippines

An updated set of eight Project Profiles was sent to USAID Mission personnel to be added to the Project Profiles binder, which now contains 108 Profiles (see attached).

Other Contract Deliverables

The sixth Quarterly Report was approved during the third quarter as a contract deliverable (see attached).

The fourth six-month workplan (March - August 1986) was submitted to the Project Monitor and approved (see attached).

The Clearinghouse compiled funding figures indicating AID's support to education for David Sprague. This was approved as a Special Report (see attached).

Radio Education Activities

The Clearinghouse participated in a meeting with Jim Hoxeng, RADECO Project Monitor, and Beatrice Andrews of InterAmerica, to discuss the latter's contributions to the writing of the Interactive Radio Instruction Handbook.

A first cut of approximately 150 names selected from the CDC mailing roster was provided as a network list for the Radio Learning Project.

The RLAP film was shown at the annual Washington Chapter SID meeting's film festival.

The RLAP scripts were reviewed to select illustrations of their interactive aspects.

Johns Hopkins University's Population Information Program requested and was sent information on the interactive radio instruction projects.

The RLAP film was sent to Zimbabwe for Unesco's annual African meeting on innovations in education.

Reading Room

During the past quarter, the AID/Development Communication Reading Room has been restocked with CDC publications and current selected publications on a monthly basis.

Marketing Efforts

There have been 185 requests for complimentary copies of DCR 51 (the special health issue) in response to announcements made in selected health publications of their availability; two have subscribed to DCR as a result.

The Clearinghouse set up an information table at the SID conference's Marketplace; sold publications, DCR subscriptions as a cost recovery activity.

Miscellaneous

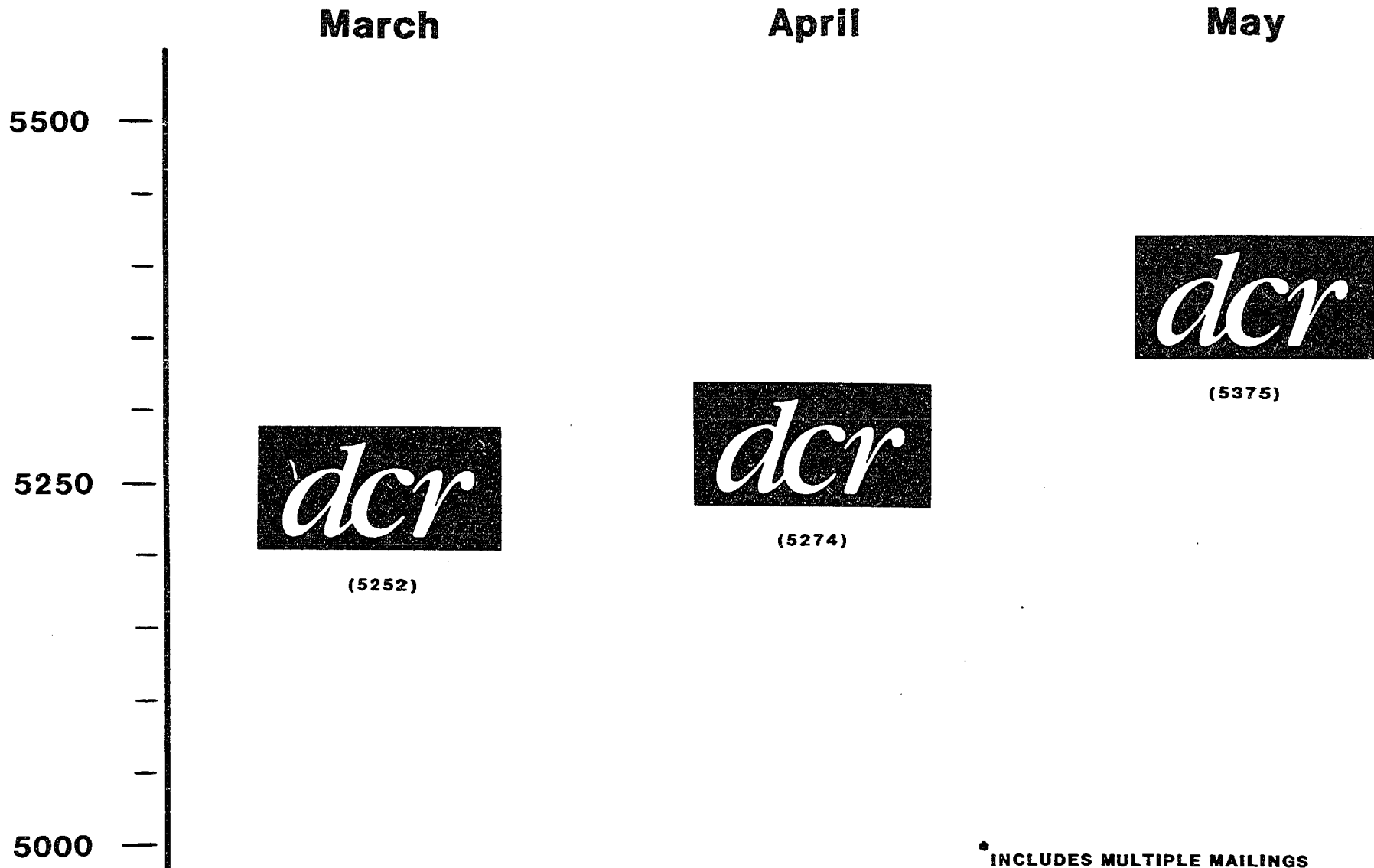
A special packet on Agricultural Communications was prepared and sent to AID Agricultural Development Officers.

The Clearinghouse acquired approximately 200 books and documents from the now closed Unesco Liaison Office; these were added to the CDC Library.

The Clearinghouse's Publications & Audiovisuals List was updated and reprinted (see attached).

DEVELOPMENT COMMUNICATION REPORT

SUBSCRIBERS*: March-April-May 1986



* INCLUDES MULTIPLE MAILINGS

QUARTERLY REPORT

JUNE - AUGUST 1986

In the fourth quarter of the contract's second year, the Clearinghouse continued to provide the services and deliverables called for in the contract and the fourth six-month workplan.

Reading File

Monthly reading files to keep the AID Project Monitor informed of selected requests for information were compiled for June, July, and August. These were circulated in S&T/ED and returned to the Clearinghouse files.

Meetings

Monthly meetings with the Project Monitor were held in June and August. Matters pertaining to the overall performance of the Clearinghouse were discussed at the meetings and then followed-up (see attached).

Development Communication Report

DCR #54 was planned, prepared, and distributed during this quarterly period. A 4-page subject index covering issues 40-54 was prepared and included. This is the first index prepared for the DCR; it will be updated regularly and distributed approximately once a year in the future (see attached).

DCR #55 will be a special issue devoted to innovative print materials, including comic books, photonovels, poster and pamphlet development, and newspapers. The issue will also include a 1987 calendar.

Subscription Data

During the past three months, DCR added 342 new developing country (no charge) subscriptions, 30 new paid subscriptions, and 23 paid renewals (see attached).

Library/Reference Services

During the past quarter, the Clearinghouse library received 15 visitors. They were oriented to the collection and assisted in identifying appropriate materials for their specific research needs. Some of these visitors included:

- Juliet Aphane
(Swaziland) Sr. Nutrition Officer,
Ministry of Agriculture
& Cooperatives,
Swaziland
- Junaidah Bajrai
(Singapore) Research Assistant,
Society for Nutrition
Education
- Joyce Burton
(U.S.) Education Development
Officer, USAID
- James Echols
(U.S.) Private Consultant
- Shahnaz Kapadia
(Pakistan) Mgmt. Training Assoc.,
AED, Pakistan
- Rashmi Luthra
(Pakistan) Doctoral Student, Univ.
of Wisconsin/Madison

During this period, the Clearinghouse kept its serials collection up-to-date by adding new, relevant periodicals in appropriate fields. These include:

- Development International
- Journal of Distance Education
- OCIAC Update

Acquisition of published and unpublished documents, reports, papers, and books to keep the collection current has proceeded at a steady pace.

Project Profiles

The Clearinghouse printed one Project Profile this quarter about a rural health program in Nigeria that trains village health workers who then return to their communities to promote preventive health care through stories, drama, and songs.

Currently, the following Profiles are being reviewed in the field:

- Farm Broadcasting, Nepal
- Kheda Communication Project, India
- INADES-Formation, correspondence agriculture course, Cameroon
- Rural Audiotheques, Mali
- Rural Newspaper, Honduras

Eight recently published Profiles were mailed to AID Mission and AID/Washington personnel. These were to be added to a binder containing previously published Profiles; additional binders and original sets of Profiles were provided to those who requested them.

Other Contract Deliverables

The third Quarterly Report of the Clearinghouse's second year was approved as a contract deliverable (see attached).

The fifth Six-month Workplan (September 1986 - February 1987) was prepared and submitted for approval.

Compilations of selected Project Profiles on the topics of agricultural communications and radio were made available to readers of DCR in fulfillment of the CDC's contractual obligations.

Radio Education Activities

All of the Radio Math audio cassettes were duplicated for Jose Vicente Alvarez and Jose Ros of the Guatemala Non-formal Education Radio project.

Brace and Hoxeng's article on the RADECO project appeared in Front Lines (see attached).

The Clearinghouse received three shipments of reel-to-reel lesson tapes from the RADECO Project in the Dominican Republic. These tapes are being stored in the Clearinghouse collection as required by contract (see attached).

Writing and revision was ongoing for the Interactive Radio Education Handbook modules, and Edgerton's revision of de Fossard's scriptwriting module was received in July.

Continued discussions with S&T/ED regarding InterAmerica's support of work by Friend.

Interviewed editorial candidate for handbook.

Reviewed scripts and broadcast and classroom tapes of RLAP to make a selection of appropriate activities to illustrate pupil response for illustrative audio tape.

AID Reading Room

During the past quarter, the AID/Development Communication Reading Room was dismantled, and a display rack was set up in the S&T/ED reception area to be stocked monthly with CDC publications and current selected publications.

Marketing Efforts

During the three-month period, there have been 241 requests for complimentary copies of DCR #51 (the special health issue) in response to announcements of its availability made in 24 health publications; 14 have subscribed to DCR as a result. There have been 28 requests for DCR #49 (the special radio issue) in response to announcements made in 49 education publications of its availability.

Announcements of DCR availability were sent to over 250 communication, education, health, and agriculture organizations and publications in the industrialized world (see attached).

Miscellaneous

The Clearinghouse's summer intern, Chris Shields, worked on various tasks that included indexing the new, more significant publications on development communication obtained for the CDC collection; assisting in responding to information requests; working with the DCR's editor to enter copy on the word processor and proof copy; and compiling mailing lists of appropriate organizations and periodicals for the DCR outreach activity to increase paid subscriptions.