Editorial Board

C O N T E N T S

Volume : 9	Issue 9(5)	September 2020

Editorial......

It is heartening to note that our journal is able to sustain the enthusiasm and covering various facets of knowledge. It is our hope that IJMER would continue to live up to its fullest expectations savoring the thoughts of the intellectuals associated with its functioning .Our progress is steady and we are in a position now to receive evaluate and publish as many articles as we can. The response from the academicians and scholars is excellent and we are proud to acknowledge this stimulating aspect.

The writers with their rich research experience in the academic fields are contributing excellently and making IJMER march to progress as envisaged. The interdisciplinary topics bring in a spirit of immense participation enabling us to understand the relations in the growing competitive world. Our endeavour will be to keep IJMER as a perfect tool in making all its participants to work to unity with their thoughts and action.

The Editor thanks one and all for their input towards the growth of the **Knowledge Based Society**. All of us together are making continues efforts to make our predictions true in making IJMER, a Journal of Repute

Dr.K.Victor Babu
Editor-in-Chief

SOCIO ECONOMIC CONDITIONS OF SCHEDULED CASTE COMMUNITY AN IMPACT STUDY OF MGNREGS IN YSR KADAPA DISTRICT OF ANDHRA PRADESH

[1]B.Vasanth Kumar and [2]Dr.M.Harsha Preetham Dev Kumar
[1]Research Scholar in PhD, Dept. of Sociology and Social Work
Acharya Nagarjuna University, Ongole Campus, Ongole
[2]Assistant Professor, Dept. of Social Work, Achrya Nagarjuna University
Ongole Campus, Ongole.

Abstract

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) seeks to enhance the livelihood security of the households in rural areas of the country by providing at least 100 days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manualwork.

Employment is fundamental pre-requisite to raise per capita income and eradicate household poverty. Poor employment opportunity is one of the key reasons for the endurance of poverty in India. After independence and particularly from the Fifth Five Year Plan onwards, Government of India has initiated several rural development programmes for raising rural employment for the alleviation of rural poverty. National Rural Employment Guarantee Act (NREGA) is one amongstthem.

Key words: Employment, Eradicate, Poverty Etc.

Introduction

The Government of India has initiated various employment generation programmes self-employment and wage employment programmes since independence. The wage-employment programmes generate employment, infrastructure and social capital. Evaluation of these programmes is another very significant component to achieve the laid down objectives. Further, these wage employment programmes must be need based and cost effective to improve the life of rural people, especially poor families. The conducted with the objective of socio-economic conditions of Scheduled Castes community in the selected villages.

The present study has been adopted descriptive research design to explain the socio-economic conditions and assess perceptions towards experience of MGNREGS.
The study adopts multi-stage random sampling method to select the sample units in YSR Kadapa district in Rayalaseema region of AP. The YSR Kadapa district was selected purposefully based on the incidence of poverty. Basing on the study was initiated by the State Planning Department, Government of Andhra Pradesh.
The study covers three Revenue Divisions, three Mandal Parishads choosing one Mandal Parishad from each selected Revenue Division of YSR Kadapa District, 9 Gram

Panchayats choosing 3 Gram Panchayats from each selected Mandal Parishad and 30 respondents from each selected Gram Panchayaths. From each selected Gram Panchayaths, 30 respondents were chosen randomly as third stage units of sampling as respondents comprising the last stage. Thus, the sample MGNREGS workers covered by the study are 270.

Table – 1 : Age of the Respondents

Sl.No	Age	Frequency	Percent
1	< - 25	47	17.4
2	26 - 35	63	23.3
3	36 - 45	115	42.6
4	46 - 55	36	13.3
5	56 - >	9	3.3
	Total	**270**	**100.0**

Mean Age ($\bar{x}$) = 36.00 years

Table 1shows that the age group composition of Schedule Caste community sample respondents. In order to facilitate further analysis, five age categories have been developed. The table shows that in the age group of 36 to 45 years are 42.6 per cent followed by 26 to 35 age group constitute 23.3 per cent, followed by 17.4 per cent are belongs to below 25 age group, 13.3 per cent is in the age group of 46-55 years and above and remaining a negligence 3.3 per cent belongs to 56 and above age group. Hence, the majority are 36 to 45 years of the respondents are leading and the average mean age of the respondents are 36.00 years.

Table – 2: Education of the Respondents

Sl.No	Education	Frequency	Percent
1	Illiterate	129	47.8
2	Primary	78	28.9
3	Secondary	41	15.2
4	Inter & above	22	8.1
	Total	**270**	**100.0**

Education is one of the important indications of socio- economic development of society. It gives analyzing capacity and wisdom to thinking and decision capacity. Education improves awareness for better life and generates positive impulses for socio-economic advancement. It controls the attitudes, opinions and behaviour of the people and influences the economic destiny of the family. Of the total respondents. 47.8 per cent are illiterates, 28.9 per cent educated up to primary level, followed by 15.2 per cent studied up to secondary and 8.1 per cent are studied inter and above.

Table – 3: Type of Family of the Respondents

Sl.No	Type of family	Frequency	Percent
1	Joint	41	15.2
2	Nuclear	196	72.6
3	Extended	33	12.2
	Total	**270**	**100.0**

Table 3 shows the details of the type of family in the study area. The table reveals that among the beneficiaries, the nuclear family system is more prevalent rather than the joint family system. The nuclear families constitute 72.6 per cent and joint family's 15.2 per cent of the total sample respondents. About 12.2 per cent belongs to the extended family.

Table -4 : Size of the Family of Respondents

Sl.No	Size of family	Frequency	Percent
1	1 - 2	54	20.0
2	3 - 4	163	60.4
3	5 ->	53	19.6
	Total	**270**	**100.0**

Though numerous queries among the respondents have found a contrary relationship between the size of the family and the level of living on the hand, and a higher average size of the family among the poorest segments on the other can be seen. The half of respondents (60.4 per cent) reported that their family size is 3-4 members and followed by 20.0 per cent comprising of 1-2 members. Subsequently, 19.6 per cent are 5 and above members.

Table -5: Type of house of Respondents

Sl.No	Type of house	Frequency	Percent
1	Thatched house	77	28.5
2	Pucca house	137	50.7
3	Semi pucca house	56	20.7
	Total	**270**	**100.0**

The table 5 gives the details of the housing of the sample respondents. It shows that out of 270 respondents, 28.5 per cent possesses huts and constructed at their own efforts and by own expenses in their respective area. The rest of 50.7 per cent of respondents possess pucca (Concrete) houses which are provided by the government agencies under the Prime Minister AwasYojana Scheme. Remaining 20.7 per cent is constructed with tiled and asbestos roof.

Here, the nature of the houses of the sample respondents has been classified into three categories namely, Hut/Kutcha, Semi-Pacca and Pacca. Building with no proper basement, walls and ventilation are treated as huts. The hut is made of grass, leaves or reeds. At the same time building with stone basement and bamboo with ventilations are Kutcha houses. They are with thatched roofs. The structures with the main opinion, having a proper stone basement, walls, windows, ventilation etc. of standard materials are considered as semi-pucca building. Building the strong stone basements stoned or bricked plastered walls, windows, proper ventilation are considered as pucca houses. They are having tiled or concrete roofs.

Table -6 : Ownership of the house

Sl.No	Ownership of house	Frequency	Percent
1	Own	240	88.9
2	Rented	20	7.4
3	Occupied	10	3.7
Total		**270**	**100.0**

As respects to the habitation of the respondents the table 6 covers that 88.9 per cent of the respondents having own homes. About 7.4 per cent of respondents those who are migrated from one village another village are residing in a leased house. Remaining 3.7 per cent are occupied houses. The houses which built in the spot are having a place with the government.

Table – 7: Occupation of the Respondents

Sl.No	Occupation	Frequency	Percent
1	Cultivation	57	21.1
2	Agriculture Labour	130	48.1
3	Wage labour	60	22.2
4	Rural artisan	19	7.0
5	Any other	4	1.5
Total		**270**	**100.0**

The researcher examined the socio-economic characteristics of the sample respondents of the SC community. Table 7 shows that the majority (48.1 per cent) respondents are their main occupation is agriculture labour, followed by 22.2 per cent is wage labour which they involve in construction work, roads works etc.. Among 21.1 per cent of their occupation is cultivation and 7.0 per cent are belongs to rural artisan and remaining 1.5 per cent are belongs any other such as cattle and goat rears etc.

Table-8: Number of earning members in your family

Sl.No	Earning members	Frequency	Percent
1	One	131	48.5
2	Two	97	35.9
3	Three	42	15.6
Total		**270**	**100.0**

The table 8 portrays that earning members in their family. The majority families are single members earned ie 48.0 percent followed by 36.0 percent respondents' families are earning two members and remaining 16.0 percent are three members in their family.

Table–9: Distribution of Livestock of the Respondents

Sl. No	Variable	Frequency	Percentage
1	Yes	98	32.7
2	No	202	67.3
Total		**300**	**100.0**

The numbers, as well as quality of cattle population owned by these communities, also have an important role in the socio-economic makeover. Livestock generates supplementary income and source of employment besides increasing agricultural production.

Table 9 shows the respondents possession of livestock population. The majority 67.3 per cent is not having livestock and only 32.7 per cent are having the livestock such as milch animals, goats etc.. This happens due to they are labourers and the majority didn't have the agricultural land.

Table–10: Particulars of Domestic Assets

Sl. No	Domestic Assets	Yes	No	Total N=300
1	TV	72.0	28.0	100.0
2	Two-wheeler	22.0	78.0	100.0
4	Auto	03.7	96.3	100.0
5	Mobile Phone	98.2	1.8	100.0
6	Refrigerator	4.1	95.9	100.0
7	Gas stove	59.7	40.3	100.0
Total Average Per centage		**43.3**	**56.7**	**100.0**

The above table 10 reveals the particulars of domestic assets of the sample households in the selected areas. In the overall study out of, 72.0 per cent are having TVs, 22.0 per cent having two-wheeler, subsequently, 98.2 per cent of the respondents having mobile phone, followed by 59.7 per cent of the respondents are having gas stoves and 4.1 per cent are owned the refrigerator. A negligible number of 3.7 per cent respondents having autos.

The mobile as the domestic asset is at the top in the sample area, Television are in the next place. In overall observation the domestic assets are TVs, Gas stove are relatively more in the study area.

The overall total percentage 43.3 per cent of the respondents having of the domestic assets whereas, 56.7 per cent of the respondents didn't have the domestic assets.

Table – 11: Possession of Agricultural land

Name of Mandal	Agricultural land		Total
	Yes	No	
Duvvur	17	73	90
	18.9%	81.1%	100.0%
Kalasapadu	17	73	90
	18.9%	81.1%	100.0%
Ramapuram	48	42	90
	53.3%	46.7%	100.0%
Total	**82**	**188**	**270**
	30.4%	**69.6%**	**100.0%**

χ^2=33.662, df=2, P < 0.000,   **Significant at 0.01 level**

Most of the respondents are landless (69.6 per cent), however the 30.4 per cent possessing small and marginal land holdings. The landlessness has been reported high in the study area where they mostly belong to underprivileged sections of the people and depends upon daily wages. The study reveals that the majority of the respondents are marginal landholders. About the majority of the households own less than two acres of land.

In Duvvurmandal, of the 90 respondents, 18.9 per cent respondents possessed agriculture land and 81.1 per cent respondents didn't possessed agriculture land.
In Kalasapadumandal, of the 90 respondents, 18.9 per cent respondents possessed agriculture land and 81.1 per cent respondents didn't possessed agriculture land.
In Ramapurammandal, of the 90 respondents, 53.3 per cent respondents possessed agriculture land and 46.7 per cent respondents didn't possessed agriculture land.
The study shows the results of the Chi-square test that there is significant difference between place of residence and Possession of Agricultural land (P= 0.000) at 0.01 levels. The possession land are different in mandal wise. The results show that there is statistically significant difference in Possession of Agricultural land their place of residence.

Table -12 : Extent of land

Sl.No	Extent of land	Frequency	Percent
1	1-2 acre	67	24.8
2	3-4 acres	11	4.1
3	5-above acres	4	1.5
4	No land	188	69.6
Total		**270**	**100.0**

More than 24.8 per cent of them have an average holding of less than two acres. More than 4.1 per cent of them hold in between 3-4 acres each and only 1.5 per cent are having 5 and above acres of land. The majority about 69.6 per cent of the respondents are not having any land. The percentage of those possessing less than 10 cents is also comparatively very low.

Table–12: Reasons to join this MGNREG Scheme Vs. Place of Residence

Place of Residence	Reasons to join this MGNREG Scheme				Total
	Assured work days	Improve irrigational source	Due to drought condition	To developown land	
Duvvur	15	23	27	25	90
	16.7%	25.6%	30.0%	27.8%	100.0%
Kalasapadu	12	16	33	29	90
	13.3%	17.8%	36.7%	32.2%	100.0%
Ramapuram	15	19	30	26	90
	16.7%	21.1%	33.3%	28.9%	100.0%
Total	**42**	**58**	**90**	**80**	**270**
	15.6%	**21.5%**	**33.3%**	**29.6%**	**100.0%**

χ^2=2.629, df=6, P < 0.854, **Not Significant at 0.01 level**

MGNREGS is a voluntary and grassroots level programme for meeting requirement of the rural poor for their social security. The scheme makes economic and social advancement through participation in the programme. In this context, the respondents were asked to explain "the reasons for joining as MGNREGS beneficiary and the responses received are presented in table. It is indicated that 15.6 per cent of the respondents joined for assured work days followed by 21.5 per cent joined for improve irrigational sources. About 33.3 per cent joined due to drought conditions and 29.6 per cent joined for to develop their own land under this scheme.

In Duvvurmandal, of the total 90 respondents, 16.7 per cent respondents expressed that they joined in MGNREGA for assured work days of employment and 25.6 per cent respondents expressed that they joined in MGNREGA for improve irrigational sources. About 30.0 per cent expressed that they joined in MGNREGA due to drought conditions and 27.8 per cent expressed that they joined for develop their own land.

In Kalasapadumandal, of the total 90 respondents, 13.3 per cent respondents expressed that they joined in MGNREGA for assured work days of employment and 17.8 per cent respondents expressed that they joined in MGNREGA for improve irrigational sources. About 36.7 per cent expressed that they joined in MGNREGA due to drought conditions and 32.2 per cent expressed that they joined for develop their own land.

In Ramapurammandal, of the total 90 respondents, 16.7 per cent respondents expressed that they joined in MGNREGA for assured work days of employment and 21.1 per cent respondents expressed that they joined in MGNREGA for improve irrigational sources. About 33.3 per cent expressed that they they joined in MGNREGA due to drought conditions and 28.9 per cent expressed that they joined for develop their own land.

The study shows the results of the Chi-square test that there is no significant difference between place of residence and Reasons to join this MGNREG Scheme (P= 0.854) at 0.01 levels. The results show that there is no statistically significant difference in Reasons to join this MGNREG Scheme by their place of residence.

Conclusion:

The majority of rural masses still dependence on agricultural sector is higher, the growth is nominal and has been worsening the employment and increasing the poverty scenario in the society. Thus, unemployment and poverty are still two major challenges for the policy makers. Though many schemes for employment generation and rural development were implemented, they could not improve the situation as estimated. Social security measures must be increased to decrease migration of the people from villages to town and to enable the people to work in the MGNREGS to create assets at the village level.

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TEACHER AND STUDENT RELATIONSHIP IN TAITTIRIYOPANISHAD

Dr.N.Venkatesha Rao
Associate Professor
Sri Sathya
Sai Institute of Higherlearning. Kadugodi. Bengaluru

Abstract

The Taittiriyopanishad is a vedic era's sanskrit text, embedded with three chapters.It is known as a principal Upanishad and it is associated with taittiriya school of Krishna Yajurveda.The three chapters are, Shiksha valli, Anadavalli and Bhriguvalli.The first chapter Shikshavalli has 12 anuvakas and initial anuvakas throw great light on Teacher and student relationship.

Here the Upanishad includes verses that are partly prayers and benedictions and partly instruction on phonetics and instructions about academic and moral ethics .It highlights the need for good and standard education. It throws light on teacher and student relationship.Deprived of these values, presented by Upanishads, makes the education system corrupt and commercial. A student trained in a commercial course naturally develops commercial attitude and he may in turn, exploit the society.

So to make a good equation: Best students + Best teachers =Best Nation,the contribution of taittiriyopanishad is always memorable and it serves as a beacon light.

Key words: Vedas and Upanishads, Humilty and character – Integration of thought word and deed - Residential education – Excellence in Sports, Exhibition, Mentoring - Balancing worldly and metaphysical goals - Seeking a prosperous life - Increasing student's strength etc.

Introduction

Vedas and Upanishads
Every one of the branches of veda contains a samhita followed by a brahmana and tailed with an aaranyaka or Upanishad..Ifsamhita is likened to a tree, the brahmanas are its flowers and Aranyakas are its fruits not yet ripened, but Upanishads are ripen fruits.The word Upanishad has been derived from the root sad(to sit) to which two prefixes are added.Upa and Ni. The prefix Upa denoted nearness and Ni denotes totality.So, this word means sitting beside with devotion.This no doubt refers to the to the pupils sitting down near his teacher at the time of instruction.The word in course of time gathered round in the sense of secret teaching which was imparted during such sittings.Because of the secrecy of teachings teacher refuses to impart the instruction to a pupil, who has not proved his worthiness to receive the instruction.

Another interpretation is there. The root Sad (to destoy) is taken with prefixes upa and ni.Upa means higher. The same root word is changed in Hindi to form the word Uper (meaning high). So going to high level of discussion and destroying ignorance fully, is the meaning of Upanishad. High level of discussion necessarily involves questions , answers and interesting debatable topics.Kenopanishad starts with question only.Shatprasnopanishad deals with the six main questions in it. In fact all Upanishads have debated using vital questions dealing with the different facets of philosophy. Among all Upanishads Taittriyopanishad has its own reputation of dealing with education and various concepts of teaching.

Humility is the major criterion for education:The fundamental message of Taittiriyopanishad.

Student should not be arrogant. It is said "Vidya dadativinayam".(विद्याददातिविनयम्)1 Education leads to humility.If any learning is not sowing obedience in the knowledge seeker, then it is not considered as education. It is just information only.Invedic education, obedience is the basic norm.Bhagavadgita tells "adhyaatma vidya vidyanaam".Spiritual education is the basic education.Arjuna learnt paashupataastra from Shiva, by staying in the heavenly world ie,Kailasa. Yet his surrender towards Krishna to teach him Baghavadgita was full of obedience. "shishyastehamshaadhi mam tvamprapannnam".(शिष्यस्तेऽहंशाधिमांत्वाम्प्रपन्नम्)2.It means "I have surrendered to you,Please teach me the right path".Thus obedience to guru is compulsory.

He should be humble and polite not only with the guru, but even with his fellow student community.

He may be a gold medalist in many papers of the same semester, yet he should not look down upon his class mates.If he is not so, how will he uplift the next generation students.How will they be polite?

Vaishmpayana learnt Vedas from Vyasa.He taught Vedas to Yagnyavalka.Oncevyshampayana got the sin of killing a child &Brahmin.He requested his students to remove that sin by spiritual efforts, While he was appealing them ,Yagnyavalka said "Why all of them, set them aside, I can my self do the process alone.?"

This caused hurt to the feelings of other learners of the Veda.As a form of punishment for this arrogance, Vyshampayana who became angry demanded the entire knowledge of Vedas, that he had learnt from him, to be returned back.He vomited all he had learnt.At that moment the Sage Taittri or Tittiri born in Angirasa gotra, took the form of a bird and drank or received those vedas.That is why it is termed as Taitriya.

This is the background of taittriyopanishad.Strictly speaking if any one is uttering ill of his friends or teachers, his degree should be taken back.Today we are not in that condition.When mal- practices are detected in examination, the procedure of tacking back the degree is in vogue. But character should be a major criteria, says the Upanishad.

As a few sports awards are seen to be taken back when immoral practices are proved. Similarly even in the current scenario, degrees should be taken back. That is the message of Taittiriyopanishad.Thus Upanishad suggests character oriented education system.

2.Unity of thought word and deed:

As a student, he should practice Oneness in thought word and deed.What he intends, he should speak the same.What he speaks, he should bring the same into practice.Then he can become a reliable leader for the society.He cannot follow corrupt practices in the profession.Then alone, he will become a role model.

So the very first oath to be taken by the student is "RitamvadishyAmi.satyamvadishyAmi"ऋतम्वदिष्यामि,सत्यंवदिष्यामि3.This means "I tell the truth,I practice the truth".Every student should remember the tragedy of Karna's personal life.He was cursed by his teacher Parashurama for having told a lie while learning.The curse, in the form of punishment, was "What all you have learnt stealthily, will not be useful in a time of your crisis". If our education should be useful at all times , being one in thought word and deed is essential.It is more compulsory in the professional areas.

This is the prime warning of upanishad ."तस्मादेवंविद्वान्तोदान्तोउपरतस्तितिक्षुःसमहितोभूत्वाम्येवात्मानंपश्येत्'4.This can be said as "one should be self controlled,calm, withdrawn to himself,enduring and conventrated sees the supreme self in him."

3. Residental education is compulsory for transformation.

In the present condition, students and teachers are together only in the college premises and that too in a short duration of working hours.To be more specific, only during the class hours teachers and students are together.**This half an hour class with half mind, would not bring full reformation.**

Referring a few self-centered teachers, it is said "they look at only bell and bill, personal involvement is nil".

It may be true to some extent. However, a real transformation is possible only when the teachers prefer to stay with students. Then by looking at the teacher's personal life, students will gain conviction to follow his footsteps.Even during lunch time, teacher should be with them. Taittiriyopanishad proposes this promise to be made by students and teachers mutually. It says "Sahanavatusahanoubhunaktu" "सहनाववतुसहनौभुनक्तु"5 Let the God enter in us to settle us with unity. Let both of us eat together is the meaning of that line.

4. Sports events /exhibition compulsory:

Veda says we should live with a strong body and sound mind.

Upanishad says that"To those who are physically and mentally weak atma is unaccessible".नायमात्माबलहीनेनलभ्य:6"So to prove the student's physical fitness, teacher should accompany with him.

Rama and Lakshmana were taught astras by Vishwamitra, by being with them for a significant period of time. When enemies were destroyed by Rama, teacher Vishvamitra was happy and complimented him.

That boosted the morale of Lord Sri Rama.Same theme is seen in Mahabharatha.Lord sri Krishna stayed in Sandipiniasharama ,learnt all vidyas and proved his valour in fighting against lord Yama and brought the teacher's son alive back to the ashrama. Teacher Sandipini congratulated him. Teacher Drona put pandavas and kouravas into an exhibition or demonstration before Public and reviewed their physical and mental

strength in public.That upholds their morale and makes them to be fit .This is hinted in the upanishadicquote"SahaviryamkaravAvahai"सहवीर्यम्करवावहै"7

समर्थश्चकुलीनश्चप्रज्ञामच्चरितोव्रती।

ऐवंधैर्यगुणैर्युक्तोशिष्योभवतिनान्यथा॥8

Shabdakalpadruma defines the student as " One who is physically capable,having good back ground, knowledge, good character, dedication and courage .It further says ,if any element is absent he cannot became student at all. As per Mahabharata Arjuna was the best student of Krishna. He was taught Bhagavadgita. To be qualified as a good student ,arjuna stayed in a lonely place,ie,forest, practiced hard to achieve weaponry and beyond all these,he humbly salutes to lord Sri Krishna and questions futher. So to provehis eligibility, student must have politeness.

निरूप्यहिवनेवासम्कृत्वाकर्मातिदुष्करम्।

अभिवादयतेपार्थःशौरेश्चपरिपृच्छति॥ 9

With all these his surrender to lord sri Krishna is complete.He says at one instance"Oh,devakinandana,

I love you and respect you a lot.what ever you say I follow it in the same spirit without second thought.

अहंचप्रीयमाणायत्वयादेवकिनन्दन।

यदुक्तंतत्करिष्यामिनात्रकार्याविचारणा।10.

5.Mentoring is a mandatory process.

Mentorship is a relationship in which a more experienced or more knowledgeable person helps to guide a less experienced or less knowledgeable person.The mentor may be older or younger than the person being mentored, but they must have a certain area of expertise.It is a learning and development partnership between someone with vast experience and someone who wants to learn.Interaction with an expert may also be necessary to gain proficiency with/in cultural tools.Mentorship is an experience and relationship structure which enhances the "amount of psychosocial support, career guidance, role modeling, and communication that occurs in the mentoring relationships in which the protégés and mentors are engaged."

The person in receipt of mentorship may be referred to as a *protégé* (male), a *protégée* (female), an apprentice or, as called in the parlance of year 2000s, a **mentee**.

The mentor may be referred to as a *godfather* or *godmother* "Mentoring" is a process that always involves communication and is relationship-based, but its precise definition is elusive.

One definition of the many that have been proposed is:

Mentoring is a process for the informal transmission of knowledge, social capital, and the psychosocial support perceived by the recipient as relevant to work, career, or professional development; mentoring entails informal communication, usually face-to-face and during a sustained period of time, between a person who is perceived to have greater relevant knowledge, wisdom, or experience (the mentor) and a person who is perceived to have less (the protégé).

Mentor refers a loyal friend and adviser of Odysseus as per Websters Dictionary.

Mentoring in Europe has existed since at least Ancient Greek times, and roots of the word go to Mentor, son of Alcimus in Homer's *Odyssey*. Since the 1970s it has spread in the United States mainly in training contexts.

An observation:Though the above definition on mentoring is having wide acceptance of including all the areas concerned but ,restoring its source to Europe is questionable.

The study of the Taittiriyopanishad throws a new light to us on mentoring.The word virya in the slogan (सहवीर्यम्करवावहै) is a combination of a prefix and a root. vi+ Irya= vIrya.Ira means Iranaie,prearana.VIrya means, special enlightenment to us. Mentoring entails informal communication, usually face-to-face and during a sustained period of time, between a person who is perceived to have greater relevant knowledge, wisdom, or experience (the mentor) and a person who is perceived to have less.

The dvivacana used in the Upanishad implies mutual and face to face counseling. सहवीर्यम्करवावहै

Let both of us have mentoring,this means even guru can learn some lessons.We come across a Subhashita in Sanskrit where it is said that we should learn lessons even from the behavior of a kid or parrot.

"युक्तियुक्तंवचोग्राह्याम्बालादपिशुकादपि"11

Kalidasa says by looking at the severe penance of the young aged Parvati even great rishis learnt some lessons about performing perfect penance. "नधर्मवृद्धेषुवयःसमीक्ष्यते"12

6. Social relevance of the courses or research activities:

Now adays we find candidates entering the job, which has no relevance for his study, soon after graduation

He works for the sake of salary and does some job unconnected to study.He forgets what he had studied for decades.Professional career is a mechanical life or a clerical way of job in many people's lives.

Even during learning, he forgets what he studied in the last semester.As a matter-of-fact, even while studying , he is unable to answer questions on certain topics and his face is shrunken as he has no clue to the answer.In a few occasions, even teacher also may not answer properly.This is unfortunate. With a creative approach, each problem should be solved with a smile.There should be some flash ,or smile in both teachers as well as students.It is possible by including, activity in the classroom, a light debate on a subject, or study of a great person's biography in various facets.This alone makes the class lively.

This is said by taittiriyopanishad in the next line "tejasvinoadhitamastu"|तेजस्विनावधीतमस्तु"13(Let our study be relevant)

"For gaining such relevance, continuous observation of society and starting of new courses and basic courses are essential.

Even the profession or the research should be relevant.ButTaittiriyopanishad stresses that it is the responsibility of both the teachers and students.Because the student at that

young age may be immature or not so much exposed to the academic world or social circles.So teacher should take the lead.

7. Harmony between teachers and students :

In a competitive world, difference of opinions do arise.Its continued misunderstanding will result in anger or silence and bitter competition. It is like a shining silver cup with a boiling water inside.Slowly aversion is developed towards education. It is more common with the student at that young age and it should not happen. Karna hated the teacher Drona. He was insulting him at various situations in the battlefield and in the royal palce while he was with Duryodhana..The result of Karna's mental agony due to the insulting remarks made by Karna towards teacher Drona, need not be elaborated in detail.Navanandas insulted Chanakya, so their entire kingdom perished.Hatredness should not be entertained even if there is justification.

Though Drona knew that his own student Dhrustadyumna is going to slay him ,he did not develop hatred.

Instead, he taught him everything. Even shukracharya taught Kacha his "mruthasanjivini vidya".मृतसन्जीविनीविद्या.Brihaspati,the teacher knew that the student is from the camp of his enemy.Kacha was the son of Brihaspati, the teacher of devas, who were inherent enemies.Shukracharya happened to become the teacher of Demons. Bitter enemity existed between the two camps.But that did not influence him while in the role of a teacher.He taught him with Love.

It also happens that excessive achievement of young student causes hatred to the teacher.The salaries drawn by the young professors of today may be far higher than the salary of senior teachers during their young ages.Teacher of the past had to endure the strain of going to the library to find exact source of information where as today's student has easy access to ppt presentations at the finger tips.

The Taittiriyopanishad makes this point and instructs both of them to take the oath."माविद्विषावहै"14

But an oath is taken in these aspects in the intial lines of taittiriyopanishad.

a)सहनाववतु- Together may we two move (In our studies the teacher and the student.

b)सहनौभुनक्तु- together may we two relish.

c)सहवीर्यंकरवावहैtogether may we two show bravery.

d)तेजस्विनावधीतमस्तुMay what has been studied become illuminative.(Bring brilliance and relevance.)

e)माविद्विषावहैMay it not give rise to hostility.(all are in same anuvaka of taittiriya third mantra)

8.Balancing spiritual and worldly progress.

Naturally at a young age student's mind will be emotional.He may not be knowing hard realities of poverty,community's favouritism, cut throat competition etc. He may decide to avoid competition.

In a fearful mood of escapism, or diffidence, he chooses spirituality as a mode to be in the safest zone.

He shuns materalistic goals and prosperity.Prosperity is, in the true sense, not an obstacle to the spiritual path.If balanced in a sensible manner, he can make it his obedient tool to widen the scope of spirituality.

So Upanishad advises us to care for this worldly developments and give first priority.Spiritual aspirations cannot be used as a shield of excuse to justify low success in worldly affairs or unpunctuality or procrastination in works and such indisciplines as a style of life.

Else, he will be looked down by others and as an after-effect he may hate spirituality itself in his evening days of life.

First attention is for this earthly welfare and next attention is for the heaven.This is the advice of Upanishad contrary to the wrong assumption of public.(पृथ्वीपूर्वरूपम्,द्यौरुत्तररूपम्)१५

9.Teacher and student; Comparison of the olden days and current situation.

May no difference arise between us)माविद्विषावहै१६

With the leaping progress of technology world is shrunken. As a consequence, far off persons are becoming nearer and near by persons are drifting far away.Rather than understanding with long-term patience we analyze others by using intelligence and feedback.It is more so with the student.Upanishad says "Teacher belongs to previous generation.Student belongs to the next generation".

This gap always exists. Student will be looking at the next generation where he has to shine.Teacher may be thinking of the past times where he has achieved a lot.But both can join in discussions and make a better world.It is like a tree well settled with old but strong root and shining with the new sprouts and buds out side.This is good for society.The process of Questions and Answers or Samvada or right conversation between teacher and pupil is the foundation of the relationship and learning process.

But the teacher and pupils have joined in the process.

Are they successful or not? This is tested by student's reproductive capacity.That is Pravacana,So both can reproduce and improve their learning.This is "sandhana" a treaty for the growth.Other wise it is " sangrama" i.e a battle field.This can be avoided with proper co-ordination between teachers and students."आचार्यः पूर्वरूपम्,द्यौरुत्तररूपम्,विद्यासन्धिः,प्रवचनगंसन्धानम् "17

10. Speak less and think more.

With the invention of technology ,communication is easier.With the intervention of mobile, chatting or sending message is easier in just a second and chatting goes on hours together.But one should not get involved in spreading rumors or time pass chats or cajoles or ragging.The lower jaw is the first culprit and upper jaw is the next one.Ifany thing is uttered at the spur of moment, man realizes the fault and bites the lower lips in contempt of what he spoke. It is wise to recollect the warning to "control the tongue" by our seniors.Hanu means jaw covered inside the lips.So first control hasty expression, because vak is sandhi.

The word वाक् is derived from the root वचपरिभाषणे means think and talk finally.The tongue in between the jaws is safer.Because it is soft .Your talk should not push you down ,or should not fix you in a quarrel with the higher ups. It should be like tongue.Upanishad has put that message in a nut shell as" अधराहनुः पूर्वरूपं,उत्तराहनुरुत्तररूपम्,वाक्सन्धिः,जिह्वासन्धानम्। "

11. Improve memory power.

The tittiribirds or the patridges are small in size, but they are very active .The Upanishad arisen from them has a beautiful message.It instructs us to instill the spirit of small birds, so that the disciples are as careful, as vigilant and as active as the birds in the quest of knowledge. It may also imply student's or teacher's capacity to store a lot in a small gadget or in a chapter.The sutra tradition in the field of Vedanta, Yoga,Vyakarana and tarka is a good example.The dictionary and the book of synonyms like Amarakosha,Halayudha,Vishvakosha all are in the form of shlokas.They are composed in verses only to improve memory power.In other languages they are not in poetry form. The poetries learnt in childhood is still in our memory,but not the prose.So bind your learning in a desirable metre,it will be with you for ever.

Sutra literature is another mile stone in communicating and recording the thoughts in memory.Sutra means indicating a widely applicable meaning with in a small capsule form of two to three words.It was said that Yajnyavalka was such a genius that he was not only able to reproduce the teachings of the Guru, but had also added his originality and insight in the Guru's Teachings.Teacher was so charmed that he had asked his other disciples to acquire the knowledge produced by Yagnyavalka as much as they could.

12. Prayer for memory.

A few students work hard and study throughout theyear.But in examination they forget every thing due to the loss of memory.Then their exam result will be highly disappointing.To overcome this defect they should improve memory.Memory and intellect are referred by the word medha. Intelligence of the teacher must end not in getting awards, but in getting good students.Student's memory should not result in just reproducing the answer and also it should not end in arrogance.He should speak politely in a way ,which pleases the teacher,and it should result in heeding to the lectures and good advices.It should be in everlasting memory.This is said in ninth anuvaka. Here three lines are more important.

समेन्द्रोमेधयास्पृणोतु, ब्रह्मणःकोशोऽसिमेधयापिहितः।श्रृतंमेगोपाय।19

While placed in a decent designation or post, surely, challenges will be there. Competitors also may be there. Indra is clever, efficient, and successful in reaching the goal and safeguarding them. He was never trapped by enemies exploiting his weakness. Student must stand strong enough to overcome all distractions.

This is seen in the reference to the name Indra."समेन्द्रोमेधयास्पृणोतु".

The Upanishad brings the plight of the student and prays for its remedy.Student says I have heard much more.The subject even covers the God, but all have vanished.How can I preserve in my memory.

This awareness itself makes us to be more vigilant in attending the tuition of the teacher. Please reserve my strong memory on ......

कर्णाभ्यांभूरिविश्रवम्।ब्रह्मणःकोशोऽसिमेधयापिहितः।श्रृतंमेगोपाय।

May indra the supreme lord ,the lord of the Vedas ,who has infinite forms and who is revealed by the eternal Vedas, strengthen my intellect.

Having known well imparting knowledge to others in a sweet charming way is a divine skill.Upanishad concentrates on that ant advices to learn such skills.May I have good disciples, may my tongue speak sweetly.जिह्वामेमधुमत्तमा।May I hear the Vedas

profusely.O God, you are the repository of vedas. कर्णाभ्यांभूरिविश्रवम्।ou are enveloped by knowledge.ब्रह्मणःकोशोऽसिमेधयापिहितः।Preserve my knowledge of Vedas. श्रुतंमेगोपाय।

13. Seeking essential sustainability.

Any one, deprived of the basic needs of life, will follow corrupt practices,or he may be in a pitiable condition.As such neither he can follow the right path, nor he can command on any one. So that particular need is also attended by the seer of the taittiriyopanishad and his prayers are as follows.

"You are the provider of all prosperity to all living beings".आवह्न्तीवितन्वाना,कुर्वाणाचीरमत्मनः,वासगंसिममगावश्च,अन्नपानेचसर्वदा,ततोमेश्रियमाव ह,लोमशांपशुभिःसहस्वाहा।20.

Extend the same all along, you, who provide food, water and cloth to me. Give me the wealth and cattle. The wealth represented by Goddess Lakshmi with her formatted or four matted hairs.

14. Improving the number of students in roll.

Some universities are making marvelous changes in the field of education.Students are like leading lights of the future generation,But the number of students admitted to those colleges are very less.Then an expected revolution in that field is not reached.So good institutes have to invite students from all sides.

Even they can go for online courses along with small period of residential training.This is seen in the ninth anuvaka as follows. But in the spur of increasing students strength, character shall not be undermined.

As a measure to retain the attendance strength of meritorious students, the Gurukula, a university of teaching, should be well reputed.Harward university and some institutes have concentrated on this. Upanishad has asked the teachers to take an oath that they will be teachers of great fame and high reputation.Because this benefits the student community in their higher studies and career advancement.

In the same way the system must be flawless in thousands of ways. Teacher shall develop that goal with concentration as he concentrates on other aspects.This is the message of eleventh anuvaka.

May the disciples come to me from all sides.आमायन्तुब्रह्मचरिणःस्वाहा।

The disciples who have control over the senses and are deeply attached to God come to me. May I have reputation as a good teacher among people. दमायन्तुब्रह्मचरिणःस्वाहा।यशोजनेसानिस्वाहा।

May I be happy all long. Oh God, with all auspicious qualities, may I be absorbed in you and You be the object of my meditation.श्रेयान्वस्यसोसानिस्वाहा।

Being absorbed in your thousands of forms in me, I get rid of my sin.तस्मिन्सहस्रशाखे,निभगाहंत्वयिमृजेस्वाहा,।21

May the pupils come to me from all sides like water flowing downhill and like the months entering into an year. यथाऽऽपःप्रवताःयन्ति,यथामासाअहर्जरम् ,एवंमांब्रह्मचारिणः।22

You are the resting place to all.Revealyour self to me and come to me.प्रतिवेशोऽसि,प्रमाभाहिप्रमपद्यस्वाहा।23

15, Social service

The students trained in the universities will be always awaiting for high positions and peak salaries.With that they grow a lot socially.They may become corporate heads or even reputed employers .Even as an efficient employee they may have a noble role in society.With all these they should develop the attitude of social service.

Service to humanity is a service to God. Othewise their wisdom's contribution is less.Many social reformers have brought a change to the society and also a recorded fame to the colleges they have studied.TaittirIyopanishad has taken this also into consideration."ManushaM ca sVadhyAyapravachaneca".

मानुषंचस्वाध्यायप्रवचनेच।24

Conclusion

The Upanishads not only deal with the philsosophical secrets which are essential for liberation.

But also their goal is often said that philosophy is not far away from life, but it is a way of life.

They are the treasures of our Indian culture and global prosperity.A re-look into them makes our all walks of life noble.

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EXAMINING THE INFLUENCE OF LEARNING STYLE AND LOCUS OF CONTROL ON ACADEMIC ACHIEVEMENT

[1]Dr. Rama L and [2]Dr. B Hareendran

[1]Assistant Professor, Bharata Mata Institute of Management, Thrikkakara, Kochi
[2]Academic Director, Bharata Mata Institute of Management, Thrikkakara, Kochi

Abstract
The Learning style and Locus of control will both play an important role in shaping Academic achievement. The purpose of research was to examine the relationship among Learning style, Locus of control and Academic achievement. Grasha-Riechmann scale and Trice Locus of control scale were administered on 200 Post Graduate college students. The results were analysed using T test, correlation analyses and regression analyses. Results of this research indicated that male and female students show a difference in adopting collaborative learning style. The correlation analyses exhibited a negative correlation between locus of control and academic achievement. A positive correlation was identified among avoidant learning style, independent learning style, dependent learning style, competitive learning style and participant learning style. And they were significant at 95% confidence level. A positive correlation has also shown among academic achievement, independent learning style, dependent learning style, competitive learning style and participant learning style. Regression analyses explained the contribution of learning styles on academic achievement.

Keywords : Learning style, Locus of control, Academic achievement.

INTRODUCTION
Studies of learning style emerged initially as a result of an interest in individual differences. Such topics were much in vogue in study psychology in the 1960's enjoyed continued popularity in the early 1970's but have, sadly, since then been out of vogue due to a changing nature of our culture or an evolution in professional interest (Curry, 1983).So the word learning style refers to the belief that different people learn knowledge in different ways. The concept of learning style has gradually own in influence in recent decades. Learning processes are known to vary from person to person because of biological and psychological differences. More than three fifths of the learning style is forced on a person biologically (Pask, 1988). Each learner has unique qualities concerning their learning processes (Reiff, 1992). Most teachers already teach the way they've learned. These might have caused a good number of learners to be disappointed, when they experience that many teachers do not compensate for their learning needs. In a setting where students come from diverse educational experiences and with different cultural backgrounds, the situation is more extreme.Next to extensive work on approaches and educational exercises, the analysis of learning styles in the classroom is one vital area that is often overlooked (Sitt-Gohder, 2001).

Locus of control is a system of belief of a person concerning the courses of his or her experiences and the factors to which that individual attribute success of failure. It can be appraised with A.D Trice Internal-External locus of control scale. If an individual has an initial locus of control, that person attributes success to his or her own efforts and abilities. An externally influenced person who attributes his or her performance to luck or destiny is less likely to make the requisite effort to learn. Individual with external locus of control are also more likely to be nervous because they feel they are not in control of their leaves. Students with an internal locus of control may be more likely to do well in situations of distance learning which require a certain amount of independence from the learner. Students with an external locus of control will need more support and guidance from the instructor positively with average grade point or GPA, and grades of course. Other studies in addition, numerous studies have been conducted on the locus of control guidelines for academic achievement.

A recent study found that this result was corroborated by the observation of significant difference between high achievement and average achievement in locus of control measurements (Biggs, 1997). Other studies involving achievement and locus of control in classroom settings have reported that internality is positively linked to certain college achievement related activities such as class participation and study skills data set to assist in learning achievement (Trice, 1985).

The standards of students thought that learning is important and could theoretically decide their academic achievement. College students vary in how the information they know is processed, stored, remembered, structured and applied; some are reflective learners and other process the information more directly.

As a result, the present study is aimed at exploring the relationship between the learning styles, locus of control and overall academic achievement of post graduate students.

OBJECTIVES

- To understand the relationships among learning styles, locus of control and academic achievement.
- To understand the impact of learning style and locus of control on Academic achievement.
- To examine the difference between male and female with the learning style, locus of control and academic achievement.

REVIEW OF LITERATURE

LEARNING STYLE

Learning style has defined as an approach within a learning state of typical mode of problem solving, thinking, discerning and recalling good overview of literature (Cassidy, 2004) .It mainly gives attention to the involvement and interaction of students with their teachers, the guides, and learning in general. The term learning style mention to the outlook that different students learn every piece of information in different ways. The concept of learning style has steadily acquired power of influence. In addition to this, learning styles acts as an individual difference factor that can illustrates enduring and stable approaches to processing information (Snyder,2000). Learning problems are

often not related to the subject matter's complexity, but to the form and degree of the cognitive processes necessary for learning the content (Keefe & Ferrell, 1990).

A dramatic improvement in the performance of students in situations where learning styles were taken into consideration indicates that the way things are learned had a greater impact than the subject covered in the course of students (Dunn,1983). It is known that the educational process is likely to be improved for both students and teachers when teachers are able to analyze their students 'differences and needs (Fairhurst & Fairhurst, 1995). Learning styles are among the principles that researchers postulate to demonstrate the variations and varying needs of the learners.

So, here it is to measure learning styles using Grasha-Riechmann Student Learning Styles Scale (GRSLSS) in order to measure learning preferences of undergraduate students. The GRSLSS helps instructors to adapt and expand to meet more needs of learners by identifying how they matching them with the instructions given to them. The learning style scale itself consists of six fundamental learning styles, a variety of which are present in each learner, though to varying degrees. The six learning styles are:

- **Avoidant**

Not enthusiastic about content learning, and class attendance.
   Don't attend classroom with students and teachers ... We are unselfish and fascinated
    by what happens in college.

- **Collaborative**

Typical of students who believe they can learn by sharing ideas and skills ... They work w
    ith teachers and peers, and enjoy working with others.

- **Competitive**

Students who learn material in order to perform better than others in
    class.We believe we have to fight for the prizes that are given with other students in
    a course.

- **Dependent**

Characteristic of students who show little intellectual curiosity and only know what is req
    uired. They see teachers and peers as structure and support sources, and look at auth
    ority figures for specific guidelines on what to do and how to do it.

- **Independent**

   Students who like to think for themselves. They prefer to work alone, but in the clas
    sroom they can listen to the thoughts of others. Learning the material they believe is
     important and they are sure in their learning skills.

- **Participant**

   Good class people. They enjoy going to class and taking charge and getting the mos
    t out of a course. Want to participate as much as possible in the course practice.

LOCUS OF CONTROL

Locus of control is an individual's belief system consists of the causes and factors on the basis of his/her experiences which can leads to success or failure. It can be assessed with Trice Academic Locus of Control of Scale. It is an attitude that refers to a generalized expectancy about the extent to which reinforcements are under internal or external control. Internal tends to the belief that outcomes of events that happening in

life of individuals are under their own control and external tends to the belief that outcomes of events that happening are out of their control.

It measures the expectations of school children regarding their role in achieving / academic circumstances (Crandall,Katovsky and Crandall, 1965). No similar instrument has received significant attention for college populations despite the extensive use of this scale, although two potentially useful ones have been produced (Clifford, 1976; Lefcourt, VonBaeyer, Ware, & Cox, 1979). Such two methods have been built from the theory of attribution, and a relatively small sample of academically applicable behaviour. Both instruments concentrate on time and research, and offer the preparation, class participation, and competitive events a short shrift. The following paper reports on the development and initial validation of a control scale locus designed to predict a wide range of relevant college student behaviours. In this initial stage the focus was on developing a highly reliable instrument, building validity with regard to generalized locus of control and achievement motivation and predictive validity with regard to academic achievement. Discriminant validity regarding social desirability has also been estimated (Rotter, 1996) and (Smith, 1973).

Thus, it is to predict a wide range of behaviour of college students by the initial validation of locus of control scale.

LEARNING STYLE AND LOCUS OF CONTROL

Evidence suggests a complex link between learning styles and locus of control. Learning is a granted gift of god to man. It is a process involving interactions among students, teachers, educational texts and other possible elements in an educational environment. Every student possesses different learning style different learning skill. They may take their own unique approach to a specific issue in a different situation. Moreover, there is a remarkable body of literature that different students learn more effectively in accordance with their different style (King, 2011).it has defined mostly by various theorists as a symbol for individual differences. Such variations can manifest in ' life styles, ' and even in types of personalities (Zhang & Sternberg 2005). Learning style is a preferred person or habitual method of information processing and transformation (Honey and Mumford 1992), (Kolb 1984). Psychological attributes, which are the result of individual differences, decide the specific strategies that a person chooses while learning (Kolb, 1984). Learning styles as cognitive, affective, and psychological characteristics serving as relatively stable markers of how learners interpret, communicate with, and react to the learning environment (Keefe, 1987). Individual's emphasis on, mental processes, internalization and retention of new and challenging knowledge stems from their unique learning style (Dunn&, Dunn, 1986).

In addition to learning style, one should take account of the personal attitude as well. One of the factors that contribute to academic success is locus of control. The Locus of Control is a personality aspect that helps to explain one's characteristics and behaviours. Control locus is a personality construct that expresses one's belief or understanding of who governs life and the world (Lefcourt, 1976). A Locus of Control refers to the degree to which a person believes he can influence or control events in his or her life. It also explains what a person believes in their life as to the causes of events. The regulate locus was described as a dimension with two opposing differentiations (Lee-Kelley, 2006).

The concept of I-E (internal-external) was first proposed by Rotter in 1966. Student with internal locus of control believes that they receive positive reinforcement and high praise is because of their own efforts and hard works. Student with external locus of control believes that their failure and success are based on interference and influence of others. So, the aim is to find relationship between learning style, locus of control and academic achievement. Despite considerable data supporting the importance of student's learning styles and locus of control, there is little knowledge about the combined effect of these two variables in expressing academic achievement.

LEARNING STYLE AND ACADEMIC ACHIEVEMENT

Style preferred by each student for thinking, processing information, and acquiring knowledge is different (Schmeck, 1999; Zhang, 2003). Some favor methodological study and fact retention as most suitable agentic style for obtaining higher grades whereas some others employs synthesis –analysis and elaborative processing as conductive to greater understanding and knowledge.(Schmeck et al., 1977). So many studies indicating that these individual styles can predict the performance of each student (Lockhart &Schmeck, 1984). So that learning strategies are most advantageous to course performance and cumulative GPA include active thinking and organized studying (Entwistle & Waterston, 1988), synthesis-analysis (Miller, Alway, & McKinley, 1987), and elaborative processing (Hall, Hladkyj, Perry &Ruthig, 2004).

Proper learning style plays a crucial importance in academic performance. Prior research shows that students who are more thoughtful and analytical in nature are more likely to perform well academically. Some have proposed that increasing academic achievement is the resultant of matching learning style and teaching methods (Sternberg & Zhang, 2001). This concept should be taken with caution, given a broad review and critique that showing a lack of empirical support for the validity of tailoring teaching styles and student learning styles (Pashler, McDaniel, Rohrer & Bjork, 2008).

In the current study, we focus on the general value of specific learning style in enhancing learning and matching learning styles and teaching methods enhances academic performance.

LOCUS OF CONTROL AND ACADEMIC ACHIEVEMENT

Locus of control plays an important role in motivating learning and developing a better person, which affect the performance of students. It is considered as a belief system of individual regarding the causes of his/ her experiences and components to which that person attributes success or failure (Njus& Brockway, 1999). This can be either internal or external (Rotter, 1966).

A student with an internal locus of control believes in his talents and skills and is tried to work hard for it and will be more likely to be involved in learning process. They would have follow proper timetable for study and possess positive academic attitude. This leads to better academic performance. Otherwise, a student with an external locus of control believes that external situations and scenarios are responsible for their success and failure. They will be less hardworking and less perpetual in learning and most of the time they consider luck or fate as responsible for grades they achieve. Therefore, it can be said that in the context of academic achievement, students with an internal locus of

control have higher tendency to believe that the reason for their success is connected to their own ability and their lack of effort is related to their failure (Thelma, 1998).

CURRENT STUDY

Prior research has established that both learning styles and locus of control are associated with academic achievement. However, not much is known about the joint influence of learning styles and locus of control on academic achievement. We also do not know how learning styles might mediate the relationship between locus of control and academic achievement. In the current research, we sought to fill this gap in the literature by directly examining the relationship between learning styles, locus of control, and academic achievement among post graduate students. Specifically, we tested the following hypotheses:

- There is significant relationship between learning styles and locus of control.
- There is significant relationship between learning styles and academic achievement.
- There is significant relationship between locus of control and academic performance.
- There is significant impact of learning style and locus of control on academic achievement.
- There is a significant difference between male and female with the factors of learning style.

METHODS

Research design

This study mainly seeks to establish in postgraduate students empirical data on learning styles and locus of control of students. A survey research design is used in educational issues and problems to analyze, determine opinions and preferences. This design is considered the most suitable tool for assessing attitudes, values or structures of personality in a natural setting by means of assessments or attitude scales (Leedy, 1993).Therefore, the research methodology for this thesis supports a sample that correlates mainly with the quantitative mode of inquiry. The research design needed to answer the research questions would require comparison between an independent variable that is the overall academic achievement of the students, whereas the dependent variable here is their learning styles and locus of control. As to the learning styles, "Grasha-Riechmann Student Learning styles Scale" was selected. In this scale, six primary learning styles namely, Avoidant, Collaborative, Competitive, Dependent, Independent and Participant are consisted. As to the locus of control, "Trice Academic Locus of Control Scale" was selected. The nature of this research is descriptive-interpretive, and intended to examine whether the learning styles and locus of control used by students in a specific postgraduate course influence their overall academic achievement.

The data were collected by means of Learning Styles Scale which contains 60 closed-ended statements addressing the concerns of students with regard to six learning styles and Locus of Control Scale which contains 30 statements. All the selected participants answered the survey with their own views. Then, statistical measures were employed to check the data collected through the instrument to make sure that the future analyses would be accurate.

Participants

A total of 200 postgraduate students from various colleges of Kerala participated in the present study. These students were consistent in their learning style patterns and all were male and female with an average of 22 years of age.

Descriptive Statistics

Mean and Standard deviation of learning style and Academic Achievement

	Mean	Std. Deviation	N
GPA	76.2320	10.22655	200
Avoidant style	34.1900	5.19121	200
Independent	37.7400	4.62269	200
Collaborative	40.7950	5.09438	200
Dependent	38.1850	5.14911	200
Competitive	32.5150	6.77787	200
Participant	36.5650	5.09860	200

Table 1

The above table (1) shows the mean (76.23) and standard deviation (10.22) of academic achievement of students. The learning styles namely, avoidant style independent style, collaborative style, dependent style, competitive style and participant style mean and standard deviation are shown in the above table.

Table shows that collaborative style has the highest mean value (40.7) and competitive style has the least mean value (32.51)

The below table (2) shows that the mean value of male for locus of control is 14.0460 and the mean value of female is 13.9735.The mean value of academic achievement is higher for female (79.0150) and lower for male (72.617). In avoidant style, male (34.52) scored higher mean value than female (33.92) and also in collaborative style male (40.8) scored higher mean value than female (40.75). In independent style, female (38.3) scored higher mean value than male (36.89). In dependent style, female (39.49) scored higher mean value than male (36.48).In competitive style, female got (33.8) higher mean value than male (30.75) and also in participant style, female (37.35) got higher mean value than male (35.54).

Correlation analysis among the factors of learning style, locus of control and academic achievement

	LC	AP	Avoidant Style	Independent	Collaborative	dependent	Competitive	participant
LC	1							
AP	-.076	1						
Avoidant Style	.230**	-.113						
Independent	.076	.024	.323**	1				
Collaborative	.181*	-.035	.092	.420**	1			
Dependent	.180*	.120	.149*	.293**	.356**	1		
Competitive	.063	.070	.415**	.304**	-.082	.326**	1	
Participant	-.057	.113	.160*	.366**	.317**	.527**	.402**	1

Table 2

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis indicated a number of significant relationships (Table 3). Here it is shown that academic achievement has a negative correlation with locus of control. Avoidant learning style has a negative correlation with academic achievement and significant at 0.01 level with locus of control. Independent learning style has positive correlation with locus of control and academic achievement and significant at 0.01 level with avoidant learning style. Collaborative learning style has positive correlation with locus of control, avoidant learning style and independent learning style. Collaborative learning style has a negative correlation with academic achievement. Collaborative learning style is significant at 0.05 level with locus of control and significant level at 0.01 with independent learning style. Dependent learning style has positive correlation with locus of control, academic achievement, avoidant learning style, independent learning style and collaborative learning style. Also dependent learning style is significant at 0.05 level with locus of control and avoidant learning style. And dependent learning style is significant at 0.01 level at independent learning style and collaborative learning style. Competitive learning style has a negative correlation with collaborative learning styles and others have positive correlation. Competitive learning style is significant at 0.0level with avoidant learning style, independent learning style and dependent learning style. Participant learning style has negative correlation with locus of control and others have positive correlation. Participant learning style is significant at 0.05 level with avoidant learning style and significant at 0.01 level with independent learning style, collaborative learning style, dependent learning style and competitive learning style.

Effect of factors of learning style on academic performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.221[a]	.149	.19	10.12763
a. Predictors: (Constant), Participant, Avoidant Style, Collaborative, Independent, Dependent, Competitive				

Table 3

ANOVA model in learning style

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1016.073	6	169.345	1.651	.013
	Residual	19795.802	193	102.569		
	Total	20811.875	199			
a. Dependent Variable: AP						
b. Predictors: (Constant), participant, Avoidant Style, Collaborative, Independent, Dependent, Competitive						

Table 4

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	75.386	8.205		9.188	.000
	Avoidant Style	-.331	.157	-.168	-2.107	.036
	Independent	.095	.190	.043	.499	.018
	Collaborative	-.194	.174	-.097	-1.113	.026
	Dependent	.218	.173	.110	1.263	.008
	Competitive	.078	.136	.052	.572	.006
	Participant	.153	.180	.076	.852	.005
a. Dependent Variable: AP						

**. significant at the 0.01 level .

*. significant at the 0.05 level .

Table 5

The ANOVA model is significant at 0.013 levels (table 5). The 15 percentage variance is exhibited by r squared on avoidant learning style, independent learning style, collaborative learning style, dependent learning style, competitive learning style and participant learning style on academic achievement of college students. The coefficient of avoidant learning style is -.331, independent learning style is .095, collaborative learning style is -.194, dependent learning style is .218, competitive learning style is .078 and participant learning style is .153 (Table 6).

The learning style explained 15%   of the variation in academic achievement of students through avoidant learning style, independent learning style, collaborative learning style, dependent learning style, competitive learning style and participant learning style emerging as significant predictors at .05 levels. To investigate whether learning style explained significant variation in academic achievement the stepwise regression analysis is been performed (Table 6). In the first step, we entered locus of control and learning style into the stepwise regression and found that learning style emerged as significant predictors.

Gender differences on factors of learning style and academic achievement

		Levene's Test for Equality of Variances				
		F	Sig.	t	df	Sig. (2-tailed)
Avoidant	Equal variances assumed	.912	.341	.809	198	.419
	Equal variances not assumed			.821	193.409	.413
independent	Equal variances assumed	.079	.779	-2.288	198	.023*
	Equal variances not assumed			-2.305	189.899	.022*
collaborative	Equal variances assumed	4.755	.030	.135	198	.893
	Equal variances not assumed			.140	197.878	.889
dependent	Equal variances assumed	.523	.470	-4.277	198	.000**
	Equal variances not assumed			-4.242	179.064	.000**

competitive	Equal variances assumed	.293	.589	-3.294	198	.001**
	Equal variances not assumed			-3.284	183.013	.001**
participant	Equal variances assumed	2.170	.142	-2.528	198	.012**
	Equal variances not assumed			-2.587	196.602	.010**

Table 6

Mean and Standard deviation for male & female in Learning style, Locus of control & Academic Achievement

Table 7

The table (table 6) shows that there is a significant difference between male and female learning styles when they adopt independent, dependent, competitive and participative learning style. Hence null hypothesis is rejected. Therefore there is significant difference between male and female students when they adopt independent, dependent,

	GENDER	N	Mean	Std. Deviation
LC	Male	87	14.0460	3.12867
	Female	113	13.9735	2.91994
AP	Male	87	72.6172	10.17682
	Female	113	79.0150	9.39844
Avoidant Style	Male	87	34.5287	4.87003
	Female	113	33.9292	5.43257
Independent	Male	87	36.8966	4.42518
	Female	113	38.3894	4.68553
Collaborative	Male	87	40.8506	4.25503
	Female	113	40.7522	5.67503
Dependent	Male	87	36.4828	5.11237
	Female	113	39.4956	4.80164
Competitive	Male	87	30.7586	6.70121
	Female	113	33.8673	6.54995
Participant	Male	87	35.5402	4.51304
	Female	113	37.3540	5.39497

competitive and participative learning styles. The t test shows that learning styles collaborative and avoidant are not significant for male and female students in the study.

FINDINGS

The results establish a number of interesting linkages between learning styles, locus of control and academic achievement. It was found that collaborative learning style has positive correlation with locus of control. Avoidant learning style has a negative correlation with academic achievement and significant at 0.01 with locus of control. Collaborative learning style is significant at 0.05 levels with locus of control. Dependent learning style has positive correlation with locus of control. Also dependent learning style is significant at 0.05 levels with locus of control. Participant learning style has negative correlation with locus of control. So that it has been proved that there is a

significant relationship between learning style and locus of control. And from the analysis we conducted, it has been proved that there is no significant relationship between learning styles and academic achievement, also between locus of control and academic achievement. But, there is significant impact of learning style, locus of control on academic achievement. It has shown that it makes a difference in male and female also when they adopt independent, dependent, competitive and participative learning styles. T test shows that collaborative learning style and avoidant learning style are not significant at 0.5 levels. Also we performed a stepwise regression and found that factors of learning style emerged as significant predictors.

DISCUSSION

The study found that there is a relationship among learning style, locus of control and academic achievements. Descriptive statistics, Correlation analyses, regression analyses and ANOVA were conducted to explore the impact of different learning style, locus of control on academic achievement of postgraduate students.

As such, it is inferred that learning styles do make an impact on the students' overall academic achievement. Such finding highlights the importance of recognizing students' varying learning styles. Teachers should be aware of the usefulness of learning styles for effective learning to take place. The learning styles framework does not change with subjects, where it actually plays an important role across all the subjects. Therefore, the results here suggest avenues of future research to understand this phenomenon. As a related matter, a study of other learning style variables should also be conducted to bring essential variables to the forefront.In most cases, a successful learner learns in several different ways. However, students with naturally one or two learning styles can improve significantly when taught through other learning styles. Thus, it is essential for teachers to know the effective way of teaching. By this way, teachers can come close to providing optimal learning environment for most students in a class

Internal Locus of Control is stable factors which can provide a strong foundation and support for learning and education. This implies the action on the part of university, colleges, teachers, and students for the development and awareness of an enrichment of Internal Locus of Control among students. The curriculum should focus on the development of self-esteem, self-awareness, and self-confidence among students as it leads to a feeling of well-being as it develops internal factor like belief in oneself, integrity, alienation and ego control. The internal factors are stable as compared to external factor like Luck. The study provides knowledge to the educational administrator to know the need to provide appropriate management style and academic facilities to develop and improve Locus of Control of college students. Healthy college climate should be ensured to encourage students to have more Internal Locus of control. Positive approach help in developing and strengthen Locus of Control. It then focuses on tapping their inner strength. Students should be encouraged to be independent, by understanding their belief in themselves would bring great success. Teachers should consistently use praise and encouragement appropriately, specifically and honestly, especially praise for perseverance and working through a problem should be practiced to help to build Locus of control. Counselling programmes and session should be arranged to improve Internal Locus of Control like encourage responsibility for

everyday living. This study assists the student to know the worth of Locus of Control can help them to be a productive and a successful person and it plays important role in their life. The student should develop high inner strength in order to be more productive and successful. They should realize that attitude affects learning they should engage in positive thinking and activities which will lead to the high Internal Locus of Control.

LIMITATIONS

The major limitation of the study is identified as the academic achievement scores being collected as self report data. In particular, future research might seek permission from participants to obtain scores from school records, rather than rely on self reported scores for students (Grzegorek, Slaney, Franze, and Rice, 2004). Although prior research found that scores from school records was positively and strongly associated with self reported score (Noftle& Robins, 2007).

CONCLUSION

The major contribution of this research is to understand the linkages between learning style, locus of control and academic achievement. Future research could also include other trait variables such as self efficacy, self-esteem, or theories of intelligence. In most cases every student has a certain degree of preference in one learning style or more than one learning style. So teachers may adopt different teaching styles which will suit students learning outcomes. This study suggests that educators may use diverse learning strategies in connection with their preferred learning styles. This will help the students to empower them in various ways.

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A STUDY ON THE CHARACTERISTICS OF ELEMENT FOLKJATRA IN UNDIVIDED MEDINIPUR DISTRICT

Dr.Anup Kumar Patra
Asst. Professor , Kharagpur Vision Academy B.Ed. College
Vill+Post-Paparara,Dt-Paschim Medinipur

Abstract

The social contribution of folklore to modern civilization is undeniable. Tradition This folkart can easily grab everyone's attention with its own technique. The main reason for this universal attraction is its own characteristics of folklore. There is need to focus special light on two subjects if we discuss the characteristics of element Folkjatra of undivided Medinipur district. First I focus the geographical position and culture of the district. The geographical position is the Bay of Bengal is at the South, Orissa district is at the south-west, Jharkhand is at the west, Bankura and Puruliaare at the north-east, Hugly is at the north, Howrah is at the north-east and at the east there is south 24 Pargana. The geographical position of the district really notable. This district is enriched in agriculture and art. And there are many antiquities which draw our attention. Besides these, many fairs and festivals are there that occur in different places in different times. The identity of characteristics of element Folkculture of Medinipur district is the overall graph of many living groups of people in society i.e. overall representation of many tribes' own place of living, food, education, clothing, art, literature etc.

Keyword:-Folkjatra.Singer,Dohar,Ashor,Canopy,Khol,

Introduction

Undivided Medinipur is the district at the west site of west Bengal and attach Jharkhand and Odisa State. This district has recently been devided into two for administrative purpose. Contai, Tamluk, Haldia and Egra subdivisions form Purba Medinipur; and Ghatal Medinipur Sadar, Jhargram, and Kharagpur subdivision form Paschim Medinipur. These two districts have been united and for the sake of research the characteristicsFolkjatra of united Medinipur has been discussed here.

There are the identities of different kinds of Folkjatra in West Bengal. Though in the history of Bengali literature there has been discussed the Folkjatra of different districts of West Bengal, yet there has been no discussion on the characteristicsFolkjatra of undivided Medinipur district. In this respect, I am the first to pay attention to this. Various kinds of Folkjatra have been performing since for five hundred years. Living in poverty, the inhabitants of Medinipur who are fond of acting can't keep away the laborious acting in Folkjatra from their way of life. They have acted in many diverse situations of their lives. The Folk-artists, on the one side, fought against the British ruler, and on the other side they gave pleasure to the common people of there country through their performance. The

trend of performing Folkjatra that began with general costumes and one individual person with different tone has come to the present state thorough the evolution of Folkjatra. Before 30 years, there was no trend of acting in the character female. All characters were played by the male actors. Now the female actors play in the roles of female character. But still there is no female musician in any troupe of 'Jatra'.

The Folkjatras that are spread over Medinipur district, are not pure 'drama' or pure 'Jatra', 'drama' and 'Jatra' have mixed together now. The troupes that acted in different times, termed these 'drama'. But, audience and the people of this district name this 'Folkjatra' .

There is no story in written letter so far. But hearing the record of the story the written form of the story has been made over the night due to reputation and they have performed different story. It is unknown that who is or are the writers of those stories. Though we get some names of the actors during the prologue of the story, but there is no identity of writer or group of writers.

Folkjatra has been formed of the legends of gods and goddesses, mythology, and romantic incidents etc. So in the research paper of the title characteristics 'Folkjatra of Medinipur', there will be discussed thoroughly various issues of mutation from the very beginning. The information that will be gathered except the told chapter will be discussed in detail in the main research paper.

STATEMENT OF PROBLEM

The artists of folkjatra of Medinipur district attach Jharkhand and Odisa are mainly workers. Some cultivate in their lands, some work in the lands of others. Some work in home craft and some work as salesman. All these illiterate people gather at the evening after their tedious work. They come at the gathering and prepare themselves for the performance hearing all their dialogues from the ustad.In fact, in this district the actors of folkjatra are illiterate,ustad is illiterate and so also the audience.Though,in the performance of folkjatra, the people gather in much number to watch the performance.

3. OBJECTIVE

Characteristics of Folkjatra is the only medium of recreation of the large part of undivided Medinipur; on other hand Folkjatra is also the medium and Solidarity. Hundreds of people in this region are involved in present Folkjatra. This Folkjatra is antique by a number of centuries, and it has no written history, no ancient document. This anicientFolkjatra has almost lost its heritage or it is on that way. So to save its heritage and to develop it , it is essential to research thoroughly on this subject. Because the informations derived from this research would survive or remain as the history of past and present. And this history will give birth to many new information and aspects for research on this subject.

4. RESEARCH METHODOLOGY:

There is no helpful effective document or history about this purposed subject of research. So this research will mainly depends on the persons involved in ancient Folkjatra, or the interview of the audience and hearers fond of Folkjatra, the examination on different Folkjatra, and the subjective discussion of various performed opera. Besides this, there is the study of the operas those have written document. Discussion on the subject with the artists who were involved or now is involved in the characteristicsFolkjatra of Medinipur, the still photographs which are with them,

examination on the audio-visual document and the treatise or written document scattered here and there these are essential for the research. Those treatise and written documents are very few in number.

- Primary data: fieldwork and statement collection 100 performers.
- Secondary data: Online data and library study, news paper, recherché paper study and journal.

5. ANALY SIS:

The elements and characteristics of folkjatra

- **Ashor (Acting area and spectators)**

Audience, the sitting of audience and the place of performance with all these venue is formed.In the venue of folkjatra of undivided Medinipur, the central open place is the place of performance. At one side of this place sit the band of flute players and the ustad with his Harmonium, and at another side there sit the players of Khol, Tabla etc. There is the canopy over the place and under it there sit the audience. At the central open place of the audience, many blankets are arrange and that is the stage of performance, in this stage folkjatra is performed. This venu of performance, the sitting of audience and all the audience form the venue of folkjatra.

Audience

The audience of folkjatra is local ,in a performance, the common people of the village and other adjecent villages come as the audience. Audience is an important part of this Folkjatra. They actively participate in the performance, in the portion of question answering, and they help to develop the story. Besides there are some audience who just sit curiously to see what will happen.

Story

The story of folkjatra is entirely rural and self-centered. The stories are taken from verse, epics and many folktales.In the story there is the impact of the life of common men.There is the rise and fall of the flow of the story.In the story,we find many songs,dances and the effect of verse.Asfolkjatra is occasional to the religious festivals,we find the influence of Hindu religion specially in it.

Music

In folkjatrasongs,dance and acting - all these are incorporated.Music is everywhere,it is related to the story of folkjatra.The words of music is rural,the tone of music is also rural.The music of folkjatra becomes longer and longer gradually.There we can see the metrical similarity between the lines of the songs.The story is musical from the beginning to the end.Folkjatra begins with the praising song and the conversation in the stiry are musical,and at the end there is the name of deity (Celebrating).

Dance

One important part of Folkjatra is dance. Here dance is presented by the principal singer andDohar. The aspect of dance is folkdance. In folkjatra, we find mainly the dance in light rhythm. But in the story based on Krishna there can be seen the dance with good rhythm. In the party of folkjatra the singer and Dohar present their dance in cyclick way. There is no use of pose in this dance.

Instruments of music

Instruments of music are essential in Folkjatra. Though in other types of drama electrical music instruments are used ,but in folkjatra we find the same types of ancient instruments.InFolkjatra the instruments that are used are – Harmonium, Srikhol, Kartal, Flute, Pungency .These are played together during the presentation of the story.

Character:-

Character is a main element in any kind of drama.Characterdevelopes the story in a drama.Infolkjatra,the characters are divided into many kinds:-

1)Major 2)Minor 3)Subordinate 4)Special. These characters are again divided into same types:-

1) Major character:-i)Hero ii)Heroine iii)Villain

2) Minor character:-(i) co – hero (ii) co - heroine (iii) Co-antihero   (iv) Co-antiheroine (v) Midwife   (vi)Night nurse (vii)Aunt etc.

3) Subordinate character:-i)Servant ii)Maid-servant

4) Special character:-i)Fool ii)Dohar

Writers of story :-

There was no written form of the story of folkjatra.It came traditionally through oral form.There is no basic development in the story of folkjatra.The same fact or incident is written several times according to tradition.There is no change in the incident or fact,but the change has occurred in the form and taste of folkjatra.The writers of the stories make the incidents of folkjatra acceptable through the process of addition and rejection.

Mass education

The main purpose of folkjatra is to educate people (audience) and enjoyment.It is not possible to compose the story excluding any of the two. In ancient time,Masseducation is served through the teaching of religion.Because at that time the chiefs of society considered the teaching religion as the medium of education. Afterwards,by the influence of modern civilization there needed the special knowledge along with the knowledge of religion for leading life. And for spreading the knowledge of Folkjatra was taken or shelter. In present days Folkeducation is following through folkjatra.

The features of folkjatraare:-

i)The birth of folkjatra is in Folksociety.

ii) There is not any unbroken bond in the story.

iii) Abundance of regional language.

iv) Devoid of solemnity,but there is exception in mythical or religios story.

v) Naturalness of stage.

vi) There is not any special difference in attitude or feeling between audience and actors.

vii) The same story gets different form in different times.

viii) There is no place of women and prompters.

ix) Abundence of music in folkjatra.

x) Abundence of dance.

xi) Masseducation is served through folkjatra.

xii) Folkjatra is changeable.

xiii)The stories are not written,they are created by any person or any group.

xiv) There is no name of writer or writers.

xv) The male characters are much in number.

xvi) The tendency to use the number 12 during the performance of the story.

xvii) The costumes or dresses are white or pale yellow and are loose.

xviii) In folkjatra a single actor acts in many characters continually.

The acting or presentation of folkjatra

The stage of folkjatra

Around the party of folkjatra there the spectators and the central place is the place of performance.At one side of this place the band of flute players and ustad with harmonium sit,and at another side there are the players of Khol,Tablaetc.Thespectators,ustad and all musicians - with all these form the gathering of folkjatra.There is the canopy over the place and the centre is used to present the story by the actors.

The process of acting

The process of acting is divided into five kinds:1)Explaining 2)Stylistic 3)Emotional 4)Extra-dramatic 5)Mixed kind. In the performance, the actors mainly prefer the extra-dramatic kind of acting. Except this, the singers gives speech in the performance. In the performance the acting of rhythmic type is used generally. Prose conversation is used in the midst of musical and rhythmic performance.

Acting

In folkjatra, acting place is the rural atmosphere in the village. For this ,acting is to be rural and village –centric. In the acting, there is no touch of urbanization. In performance, nothing is used to present any scene or to create any lighting atmosphere. But all these are done only through acting. The acting of folkjatra is lively and moving. The mourning of Beulah or her going from one ghat to another in a boat can easily be presented on the stage through acting .About the exact place, time and situation the main creating power in folkjatra is describing conversation. And the effective conversation is employed in accordance with the audience.

The costumes of folkjatra

The costumes of folkjatra of Medinipur district are very simple. The used elements are cheap power, Micadust, Kajol, Alta etc. The actors smear dusty powder and mica in their faces, and so their faces sparkle in the light. The color faces is done in respect of character. The face of Ramchandra is light blue, under the eyes of giants there is the red line. The male characters wear share a female dress in the style of dhoti. The courtiers wear the clothes with threads of gold and silver. The hermits wear pale yellow coloured clothes. The fiber of jute is used to make beard and mustache. Same actors use artificial hair made by jute fibre. Male characters wear sharee to make them women during the acting. Mask is used to play the characters of bird dev, Hanuman. deer and giants or demons.

The dialog of folkjatra

It is not important how the dialogues are told in the performance. Here, dialogue is only the medium of depicting the story or incident. Generally in the dialogue we find mistakes in proper pronunciation.

Emotional flavor of folkjatra

In the mind of every men, there are same instinctive emotion. These emotion flow naturally in their mind. This flow or current goes in the subconscious state of mind .When it comes under the impact of exciting objects, it gets excited. And then the instinctive emotion gets its flavour in addition to mode of perception. The result is the emergency of enjoyment and pleasure. The actors of folkjatra serve this pleasure to the audience through their acting.

The performers of folkjatra

The performance of Folkjatra are all the persons who are essential in the performance i.e. actor, actress, Gayen, Dohar, musician, ustad. The absence of anyone among them can spoil the total performance. The performance is possible by active participation of all of them. Distinct discussion about them is given below

Actor

The performance begins after the welcoming song. The principal actor i.e. the hero of the story gives the proposal. In this scene, the other actors also become present.Lakhindar of Manasamangal,Rajkumar of Jugijatra,Shiba of Shitalamangal - these characters are the heroes, they are the principal character but in the performance their presence is short. The person, who plays these charactera,has to play many other roles in the story.So,infolkjatra these persons would be given the status of actors.

Actress

The man who plays the role of female character is named as actress.Here,the males play the roles of female characters. The man who play the roles of female characters is in the language of folkjatra called as "Nakalrani", mainly the flow of the story is maintained by Gayen. He dances, questions and also gives answer to these questions, says about local problem and in this way he adds the audience to the performance. He become god or goddess, creates diseases and problems and also cures them for the welfare of people. In the performance the Gayen is an important character.

Dohar

Dohar is also an important character. The actors who can not sing or can not dance, take the help of Dohar.Dohar does their works.Dohar performs wonderful acting sometime as male actor and sometimes as female. He goes among the audience, gossips with them and smokes also. And again comes to stage and performs his acting. He makes through his acting some funny situations which have no relation to the story.

Musicians

Musicians are those who play the instruments of music. Musicians play very important role in the performance with the rhythm of their instruments performance goes on scccessfully. If,there is any mistake in the rhythm, acting, singing, dancing can ̓t match with one another. The musicians are not connected directly with the performance but in the performance they have a greater role. In Folkjatra, there are six musicians in maximum case. The action of a musicians goes incessantly from the beginning to the end.

Ustad

In folkjatra, the contribution of ustad is valuable. He does participate directly entering the stage like principal Gayen.He does his duty together with the Dohars.Folkjatra is not possible without the presence of ustad.He sitting with the Dohars at one side of the stage sings the first welcoming song, he tells the ancient story,

controls the flow of performance, composes chorus song, joins others during their singing, controls the music of the instruments and also acts the character who is absent there.

7. Conclusion:

The folkjatra of this district is created sheltering the folkjatra and myths. The trend of folkjatra is spread from Gopiballavpur at West to Nandi gram at East. The folkjatra developed in the places - Karbania, Shasar, Nayabasam, Gopiballavpur, Kakra, Nayagram, Yamiyapaul, Belda, Contai, Panskura, Ghatal, Debra, Narayangar, Pingla etc. with the improvement of communication, the influence of the jatra of Chitpur is to be found in all kinds of folkjatra. Naturally the archetype of folkjatra has been confined to certain groups of people. And in some places, this tradition of Folkjatra has been flowed through modern opera jatras. The educated persons along with the uneducated, have taken part in it. And gradually, the influence of modernism is being found in folkjatra with the mutation of it. Women are coming forward to play the roles of female characters. Now we find here the co-existence of modern musical instruments and old instruments. In some places, at the centre of the gathering the stage is made high for acting. Thus, gradually folkjatra has flowed rhythmically with the modern jatra.

As a result, the sanctity, the ownness of folkjatra is being lost by the influence of Chitpur. The main reason for this is economic. Because unlike the artists of other jatras, the income of the artists of folkjatra is not much/enough. Besides, there is the lack of administrative enthusiasm. So, to restore the sanctity of folkjatra , the coming forward of culture loving people is very necessary. And thinking about the pain and misery of the artists, economic help is also needed.

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IMPACT OF COVID 19 PANDEMIC AND CHALLENGES FACED BY STUDENTS, TEACHERS AND PARENTS: A CASE STUDY OF CACHAR DISTRICT, ASSAM

Dr.Sita Malakar
Assistant Professor,Department of Sociology,
St. John College, Dimapur, Affiliated to Nagaland University

Abstract:

The nationwide COVID-19 lockdown forced schools, colleges and universities to close and send their students home which, in turn, impact on structural functions of education system. The epidemic is continuously spreading all over the world and reached 185 countries and resulted in the closure of schools, colleges and universities. The closure has placed unprecedented challenges on students, teachers and parents around the nations. The present's paper is attempted to explore the Impact of Covid 19 Pandemic and Challenges faced by Students, Teacher and Parents: A Case Study of Cachar District (Assam)

Keywords: Pandemic, Lockdown, Impact, Educational Institution, Challenges

1. Introduction:

The state governments across the country began shutting down schools and colleges temporarily as a measure to contain the spread of the novel corona virus. It's close to 6 month and there is no certainty when these will reopen. It is a crucial time for the education sector—board examinations, nursery school admissions, entrance tests of various universities and competitive examinations, among others, are all held during this period. As the days pass by with no immediate solution to stop the outbreak of Covid-19, schools and universities closures will not only have a short-term impact on the continuity of learning for more than 285 million young learners in India but also engender far-reaching economic and societal consequences.

The structure of schooling and learning, including teaching and assessment methodologies, was the first to be affected by these closures. Only a handful of private schools could adopt online teaching methods. Their low-income private and government school counterparts, on the other hand, have completely shut down for not having access to e-learning solutions. The students, in addition to the missed opportunities for learning, no longer have access to healthy meals during this time and are subject to economic and social stress.

The pandemic has transformed the centuries-old, chalk–talk teaching model to one driven by technology. This disruption in the delivery of education is pushing policymakers to figure out how to drive engagement at scale while ensuring inclusive e-learning solutions and tackling the digital divide.

2. Statement of the Problem

According to Census 2011, total population of Cachar District were 17, 36,319 among them 88, 6,616 were male and 84, 9,703 were female. The literacy rate among male were 85.85% and female 74.62%. According to the Government of Assam, 1234 are Elementary Schools and 158 are Secondary/Higher Secondary Schools. The Prominent schools in the district include JNV Pailapool, Silchar Collegiate School, Cachar High School, Adhar Chand Higher Secondary School, Narsing School, Government Boys & Girls Schools, Holy Cross School, Pranabananda Holy Child School, Pranabananda Vidya Mandir, South Point School, Maharishi Vidya Mandir, KendriyaVidyalayas and Don Bosco School and so. Covid 19 pandemic has changed teaching-learning process in the education system. All most all the state government has been taking several measures to promote and encourage e-learning system of education. However, many school teachers started online method of teachings for the wellbeing and better future of the students. But the success of online education would be possible if students equally meet all infrastructures and other facilities at the hand. According to National Sample Survey Organization's internet communication and Accessibility data shows that outside of urban affluent households, in most cases, there is not enough high-speed Internet service. As a result, most of the students will never be able to take online classes (high-speed internet is required for video conferencing) and will not be able to download study materials as well. According to the NSS conducted by the National Statistical Office in 2016-17, only 23.4 per cent of people in cities and only 4.4 per cent of people in villages have computers. In all, only 23.7 per cent of people in India have access to the internet. It is 42 per cent in urban areas and only 14.9 per cent in rural areas. Only 11 per cent of students in this country have online services. Although there is internet in this country, its speed is not the same everywhere. Many private schools are now teaching through an online application called zoom / Google meet. But about 1 GB of data is running out in an hour class. How the families can afford this android phone or internet service for children is unclear. Where people do not have money to procure flour in this recession market, how can they access the internet? Many remote areas students who are economically weak are not able to effort PCs, Laptop, Phone and remained unknown with operating android mobile phone. It is also challenges for parents who are not aware about e-learning education system. Sudden shift has created fear among both students and parents. Though a significant role is played by teachers and students to overcome the challenges but 70% of the student's still not reached all facilities to study from home.

3. Objectives: To explore the Impact of Covid 19 Pandemic and Challenges faced by Students, Teacher and Parents: A Case Study of Cachar District (Assam)

Methodology: The present study is qualitative in nature. The researcher for the purpose here had made use of primary data and secondary data. For primary data collection researcher has used online questionnaire method and secondary data has been collected from journals, newspapers etc.

4. Review of Literature

1. The World Health Organization (WHO) 2020, declared COVID-19 a pandemic on March 11, 2020, as increasing numbers of illnesses and deaths that began in China have continued to grow internationally (WHO, 2020), after increasing numbers of illnesses and deaths linked to a novel corona virus were noted in China and other international locations.

2. **Jaspreet Singh and Jagandeep Singh, (2020)** in their study "*COVID-19 and Its Impact on Society*" tried to analyze the impact of the COVID- 19 in the life of the individual as a whole. Everyone in the world is directly or indirectly facing the severe consequences of this disease. Many countries have declared unprecedented lockdowns and emergency. The Schools, Colleges, Universities, Pubs Market, Mall, Shopping Complex etc. are shut down by the Governments. It has created an environment of fear, anxiety and stress among the developed and developing societies.

3. **Bhargabi Kundu and Dipak Bhowmik,** (2020) in their study *"Societal impact of novel corona virus (COVID−19 pandemic) in India*" discuss that domestic violence has become the most unexpected thing in this lockdown condition, and suggest that some officers may be deployed to focus on these complaints only, especially the village areas should be in the more priority. As the risk factors among children and old people are more, they should be taken special care. Special counselling may also be done mainly for old people to reduce the panic.

4. **M. Nicolaaet.all, 2020** in their study *"The socio-economic implications of the coronavirus pandemic (COVID-19): A review"* stated that COVID-19 has affected all levels of the education system, from pre-school to tertiary education. Over 100 countries have imposed a nationwide closure of educational facilities. UNESCO estimates that close to 900 million learners have been affected by theclosure of educational institutions. Whilst the intention of these closures is to prevent spread of the virus within institutions and prevent carriage to vulnerable individuals, these closures have had widespread socioeconomic implications. COVID-19 has had an impact on social mobility whereby schools are no longer able to provide free school meals for children from low-income families, social isolation and school dropout rates. It has also had a significant impact on childcare costs for families with young children. Additionally, there exists a wide disparity amongst populations with a higher income who are able to access technology that can ensure education continues digitally during social isolation.

5. **Mayukh Biswas 2020,** in the article "*Quarantined Education, Unlocked Students' Protest",* mentioned that country's primary and secondary schools have been closed for several months due to the long lasting Corona crisis. As a result, 24.7 crores students of this country have faced a deep crisis. Three lakh children's may die in India in 6 months due to discontinuation of mid day meals, which may result in

various diseases. Mid-day meal is a key pillar of the overall education campaign to bring education to all. But in the last four months, it has been irregular in the whole country, except state of Kerala.

5. Result and Discussion

5.1 Sudden Shift from offline to online

The study suggests that sudden shift from offline to online learning without any specific planning especially in the Cachar district was not appropriate and satisfactory. Many school face problems on online format which has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span. Further a large proportion near about 70% of the student population untouched due to the digital divide in the District. We are now beginning to realize that online learning could be dull as it is creating a new set of passive learners which can pose new challenges.

5.2 Unprepared teachers for online education

Online learning is a special kind of methodology and required technical skills and not all teachers are good at it or at least not all of them were ready for this sudden transition from face to face learning to online learning in the district. Thus, most of the teachers are just conducting lectures on video platforms such as, Whatsapp, Zoom, which may not be real online learning in the absence of a dedicated online platform specifically designed for the purpose. It is seen that a very few school teachers are familiar and conducting online classes through Google classroom.

5.3 Technical Knowledge among teachers

We know all are not perfect in the world "practice makes a man perfect" phrase that all we heard from our childhood. From chalk talk teaching to online teaching is very much challenging job for both teacher and students. It is found that some of the teachers do not have basic knowledge of handling android mobile, Computer and laptop as well. Lack of technical knowledge threats online teaching and future of the children.

5.4 Device used for online class

Generally it was in the mind set of parents that using mobile phone is not good at early age by the children. Practically pre pandemic situation was different where students were advice for not using mobile phone, but due to shift from offline to online classes teacher advice students to use android mobile or either laptop and continue online classes from home. It is found that majority of the students used mobile phone instead of PC or laptop. Children pressurize parents for android mobile or laptop which create an unhealthy situation in the family where 3 to 4 children's avail online classes through one mobile at a same time.

5.5 Owner of the Device and students

It is found that most of the students using their parent's mobile for online classes' reason are low earning family unable to effort mobile for each child at home. In a family where number of child is two and above one device is used. Study says that high earning family child effort own mobile whereas low earning family use their parents mobile.

5.6 Network availability and students

Country like India network issue is not new. The study says that urban area students to a large extent sometimes face network problem but compare to urban students remote and village area students frequently face network problem to attend online classes.

5.7 Lack of attention in online class among students

In Study, it is found that majority of the students are failed to give attention in online classes, they give attendance to the respective teachers but either they engage in Whatsaap chat with friends, relatives, playing video games or other activities during online classes. It is not always possible for teachers to do video on for each student at a same time because of network issue in some area.

5.8 Utilising proper material and students

Feedback is one of the important appliance of online curriculum by which the teachers can be evaluated and after getting feedback the teacher can be self –introspected him or her .Every teacher wants to get good feedback from the students therefore teachers provide different sources of study link and Pdf version of materials to students. From the study it is found that majority of the students are incapable to open links or download the materials. As a result many students are deprived to avail these facilities in time which shows poor indication of online education system.

5.9 Online test and measuring understanding level

Conducting online test and measuring understanding level of the students is very much challenging job for a teachers. When a teacher conducts online test a very few students honestly appear exam and majority of the students who appear exam search answer from others websites to get well marks and there are also few students who do not appear exam. Therefore it can be stated that online test impacting child behaviour and mentality, at the same time teachers embarrass to measures the understanding level among students.

5.10 Online class's adoption and health issue

Online classes affect the eyes of the students due to long hours in front of the blue screen for more than 5 to 6 hours every day. As a result students lose concentration and divert in to others media platform as a result its effect on health and study.

5.11 Lockdown and mental stress

Extreme isolation and consecutive lockdown measures, creates several other issues including social anxiety, panic states due to uncertainty, economic recessions and extreme mental stress among students and in their family.

Some of the measures:

- There is a need for necessary arrangement to meet the crisis and build a flexible Indian education system in the long term.
- Immediate measures are essential to ensure continuity of learning in government schools.
- Open-source digital learning solutions and Learning Management Software should be adopted so teachers can conduct teaching online.
- Inclusive learning solutions, especially for the most vulnerable and marginalized, need to be developed.
- With a rapid increase of mobile internet users in India, especially in the remotest parts of the country. This can change the schooling system and increase the effectiveness of learning and teaching, giving students and teachers multiple options to choose from.
- Further, immediate measures are required to mitigate the effects of the pandemic on job offers, internship programs, and research projects.
- It is also important to reconsider the current delivery and pedagogical methods in school and higher education by seamlessly integrating classroom learning with e-learning modes to build a unified learning system.
- In this time of crisis, a well-rounded and effective educational practice is needed for the capacity-building of young minds. It will develop skills that will drive their employability, productivity, health, and well-being in the decades to come, and ensure the overall progress of India.

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BUYING IN MALLS BY THE YOUNGER GENERATION: THE WAVE IS ON THE RISE

Shikha Rani
Research Scholar, Lingaya's Vidyapeeth Faridabad, Haryana

Abstract

The traditional country like India is ranked among very few emerging economies in the South Asia that is offering a tough competition in the retailing and development of mall culture. The country is also growing incessantly up when it comes to infrastructure in the mall and retail shopping. Increasing number of youth of India vouches for mall shopping and this behaviour is predominantly increasing in tier 2, tier 3, tier 4 and tier 5 cities. Irrespective of the fact whether it is about buying small time commodities or lifestyle items, the new age malls in India provide everything, and this is the hunting ground of the Indian youth.

Millennialshave a completely changed shopping behaviour, and this has proved a bust for the retailers. Increasing number of new generation mall buyers are going out for unique products simply for the reason that they have the diversification available, and more importantly such diversification comes changing tastes. The young generation women buyers are searching for products that do not come with feminine characteristics. This means the new age women buyers are buying the products that are in style and more popular in the market. The shopping behaviour of millennial age groups is captivated by new interests and all such new interests are the result of excessive advertising done on social media.

Majority of the younger generation buying the products while they are shopping around for products are over-indexed for speciality products ranging from electronic gadgetry, iPhones, mobiles and the exclusive line of beauty options from the brands. In fact, the surge in beauty products is seen among the both types of young shopping population, i.e. males and the females.

Keywords: *Customer, retail sector, shopping malls, purchasing behaviour, advertising, mall shopping, young generation shopping*

Introduction

Retail industry in India is emerging as the new sector in India, providing the scope for one-use income for the consumers. It is not the low point to think that shopping in retail stores has diminished and taken over by the mall shopping. This type of shopping has become one of the crucial and attractive ways for the young and growing adults between 18 years and 30 years to visit the malls around their living areas and shop for one or the other type of product.

Shopping, especially the ones that are done in the malls have in the recent times ranked over and above the online shopping. The youth of India has aggressively shown more inclination towards the bricks and mortar shopping and more of excitement.

The mall shoppers belonging to the age group between 13 and 24 years besides showing addictiveness towards the music, video games and the movies have always shown their interest for the mall shopping and that too on various levels.

More essentially, 71% of the total monthly expenditure put into the basket by 13 and 17 years old and around 70% between the 18 and 24 years age group have penchant for the brick and mortar shopping experience, and this seems quite exciting to note.

Young shoppers gain an overwhelming experience, which comes through the means of individuality, authenticity and uniqueness. Shopping at malls give the young an all time advantage to personalize their clothes, shoes and accessories, this is an enriching experience.

Shoppers at the young age are four times influenced to shop at the malls by their coevals and the friends in their locality and thrice more influenced by the displays made within the stores, and least by the social media channels.

Young adults use their mobile devices to gain valuable knowledge and information about the shopping malls before they set their feet out there. In addition, use of Email communication brings out detailed information relating to the fashion, and variety of brands available around.

II –Literature Review

Shopping malls, supermarkets and hyper markets have seen growth of young consumers and changes in the behavior of the youthful consumers, who are searching for articles that are of interest to them. A few researches have been studied and reviewed with respect to the young consumers shopping behavior in the shopping malls, super markets etc.

There is repeat footfall of the young consumers in Patiala Malls and Hypermarkets for the very reason that products are sold on superior quality and affordable pricing. The product range is also quite diversified, and this is liked by the young buyers. (LeHew et al., 2002). Most of the new age and hi tech malls attract the youthful consumers because they want to get relief from the boredom and look for the entertainment, relaxation and more number of choices to go for the comparison shopping. (Bloch et al., 1994; Roy, 1994).

Most of the young consumers like to travel to other areas for shopping as this gives them the natural benefit to make good selection of the products liked by them. Burns and Warren (1995). The key objective of retail store or the mall is to bring the attraction

among the minds of younger lot. There are a mélange of products, which give young buyers the idea to have more in small time. Davies (1995).

The modernity and lifestyle changes in Indian society have brought transformation in the buying behavior, and this has happened more actively in case of young audience. White (2008).   The price, quality and variety are some of the driving factors that make difference among the young buyers to go out for the mall shopping. (Severin et al., 2001; Yilmaz, 2004).

Young mall buyers are attracted towards different types of material shopping, and this behavior is motivated by voxpopuli and other prevailing factors - Taushif and Gupta, (2013). Customers buying products while shopping in the malls are generally prejudiced by third party consumers for whom the products are bought, Applebaum (1951). The orientation for shopping the products, valuable perceptions, lifestyle dealings change with the genders considerably, Sohail (2015).

There is a growing potential for development of malls, and this means there will be more boost to the retail industry. Since the liberalization of government policies and advancements in technology, shopping in the malls is not only considered safe and secured, but interesting too, (Taneja, 2007).

Malls in India add to significant functional and experiential welfares apart from providing a potential platform for entertainment and other activities, Khare (2010). Shopping malls not only provide products of varied kinds, but these are also the potential resource for recreation, enjoyment and enrichment, Yaaminidevi (2013).

Shoppers at shopping malls are concerned on quality, price and styles along with variety of demographic variables, Ravindranet al. (2009). Visual merchandising plays a critical role in the minds of the consumers, with specific concern for the women only apparels, Madhavi and Leelavati (2013). Consumers have wider range of products available at one point and at a particular time frame to the consumers, Mayya (2015).

Cross cultural shopping is prevalent in malls and this means all types of communities reap the benefits of the shopping, Wijnen et al., (2011).

III. Objectives
The objective of research is outlined herewith:

1) to understand the strategies of shopping malls employed in attracting as well as utilization of the young traffic
2) to find out the best deals and raffle offers which attract young buyers
3) to study the attraction packages offered by the owner to attract the young consumers
4) to analysis the shopping pattern followed by young generation when they are in the shopping malls

Merits of Good Shopping Malls
Mall culture first began developing in the early 19th Century in the form of Paris arcades. It was at this time that these shopping arcades became an instant hit among the populace for the very obvious reasons. Shoppers from all age groups had the feeling that malls and super markets were the place where interaction could happen on various levels along with other things. The development and evolutions of malls and other similar shopping places have begun to make wholesome differences in the lives of the people. The elaborate mall culture has evolved in India to suit the buying taste of

different groups of people.

Malls are the conglomerate of shopping plazas, and each of these used to cater to the needs of the rich and the elite class people, but not anymore. As the cultural intermingling happened, young people from various ethnic groups and classes became the part of shopping culture.

It is very obvious that young people are attracted to mall shopping for several good reasons like:

- Availability of multi floor parking facilities that also connects directly to the floor spaces through the lifts.
- Malls and shopping stores offer one single place where the youngsters can easily shop for best brands. In this way, they are going to save their precious time as well as engage in superb quality gossiping.

- Malls are for everyone, and for all types of groups. In the recent years, the growth and development of mall culture has led to preponderance of young buyers. There are malls for various budget buyers including the youth. Malls and other shopping centers are generally situated in prime areas, and therefore, on the off chance that a retailer sets up a store in a shopping center, he can have the shop in a prime area with a negligible speculation. Shopping in the prime locations can lead to quick shopping and this is essentially possible because of the easy accessibility.
- Malls have a dynamic culture, which means it attracts the youth of all kind and from all the age groups to visit to shop and add value in their lives.

Research Methodology

Future Group

About Future Group

The big corporate retail group was incorporated in India in the year 1987 with the business name - Manz Wear Private Ltd., and brought up the Pantaloons brand, which soon became India's premium brand of world class trousers. The group was visualized and operated under the guardianship of Kishore Biyana of the Rajasthan, who already had wide range of experience in the field of fashion, logistics, financial services and retail industry. Future Group's main focus was on the retail business.

Methodology Implied:

The entire study implied is on the basis of secondary data from corporate reports "Indian Retail Report 2015" as well as the annual financial reporting published in websites and other company auditing reports. The secondary source of data collected was also

instrumental in making a fair judgment of the corporate functioning and profits culled through the financial years 2016-2019.

SWOT Analysis:

Strengths: The malls are present in almost every major city and town of India, which means that it has good brand equity. Exclusive range of retail products from premium brands are lined up offering good number of choices and value for their time and money. New low price schemes are available for attracting the customers with superb investment capacity. Future Group malls present remarkable family shopping experience unlike anything else.

Weaknesses: The retail business is based on Indian consumer market and it faces competition from international retail business. This competition has resulted in limitation in market share. The malls are however showing high rate of growth in festive seasons due to high discounts.

Opportunities: The retail business is focusing on customer choices and other preferences in the recent years and weighed towards organizing retail market in India such that global expansion is possible and joining with the international brands.

Threats: Due to globalization, new global retail oriented businesses are eyeing Indian markets. Low prices products sold in the Indian market are seen as the product with low quality. More importantly, the government policies with respect to Indian retail industry are not welcoming.

Performance Measure of Future Retail Limited

Future Retail Limited has 401 stores located in 122 cities across India. Here is the demarcation of the performance:

- 196 Big Bazaar stores
- 185 Food Bazaar stores
- 97 ezone stores
- 35 Home Town stores
- 6 Foodhall stores
- 3.3 million towels, 1.4 million bed sheets, 1.1 million home appliances,54,000 carpets , 26,000 beds, 12,000 dining tables, 14,000 wardrobes
- Food Bazaar won the 'Images excellence Awards'
- Big Bazaar won the 'Images Most Admired Food & grocery Retailer' in 2014 for Food & grocery category
- Food Bazaar accomplished the 'Images excellence Awards in the league of Largest national expansion' for the year 2014

Conclusion

Future Group is one of the foremost business group when it comes to the retail business in India, It is offering wide range of consumer brands and heavy discounts on them, which is the reason the group has maximum number of consumers, which are also growing on daily basis. The Indian retail gargantuan is working under 11 highly specialized formats and fulfilling the needs of small time and big time customers in cities and towns.

Ambience Mall, Gurgaon

Ambience Mall is a world class shopping mall located in Gurgaon with a whopping space for car parking, and retail area of 18 lakhs square feet. Several floors in the mall have as much as 860 meters of shopping area. Ambience Mall is not only known to be the India's biggest shopping malls, but it has also become the most popular malls in Asia. The mall opened in 2007.

SWOT Analysis:

Strengths: The mall provides innovative and exclusive range of retail products and fashion clothing on great discounts. The mall also provides wide range of variety too. It is a superb family shopping experience.

Weaknesses: High levels of competition with adjoining malls in the same area. This competition has resulted in division of customers, although customers get good number of choices.

Opportunities: The shopping mall is concentrating on the needs of its valuable customers. It is also looking forward to the expansion methods.

Threats: As the result of globalization, several international players are also vying for the retail shopping business in the diversified Indian market. There are a few retailers, which are offering low cost products, but certainly these come at the expense of poor quality, eventually resulting in the downside of the business.

Methodology Implied:

The entire study implied is on the basis of secondary data from corporate and the annual financial reporting published in websites and other company auditing reports. The secondary source of data collected was also instrumental in making a fair judgment of the corporate functioning.

Performance Measure of Ambience Mall

- The ambience mall has 11 screen multiplexes and there are 4 Storey Atriums which cross over 1.3 Million square feet.
- The mall is designed to address the functional as well as the aesthetic perspectives
- Plush Anchor Stores
- Attractive Video Arcades and Special Kids Zone
- World Class Escalators totaling 36 in number
- Space for Organizing the Fashion Music Shows
- Piped Music that Can Be Heard Loud and Clear
- Every Floor Provided with Exquisite Washrooms
- State of the Art Security Systems
- Innovative Fire Escapes on Every Floor
- Huge car parking space in the basement for 2500 cars
- Service Lifts connecting all the floors
- 5 Star Residential Hotel with 250 Rooms
- Best Shopping Center of the Year for 2007
- Most Admired Shopping Centre of the Year for 2007

Conclusion

Ambience Mall, Gurgaon is among the very few customer oriented and customer friendly malls offering all kinds of goodies and wide range of products for every class

and ethnic group. The shopping mall is perfectly suited to the needs of prospective customers in Delhi and around.

Shipra Shopping Mall, Ghaziabad, Indirapuram

Shipra Shopping Mall is strategically situation on East side of Delhi, at a popular place called Indirapuram. The total built up area of the mall is 4.5 Lakh Square Feet. The fascinating thing about this mall is its grand Roman architecture, which also adds a unique and classic feel to it.

SWOT Analysis:

Strengths: The mall is known for providing exclusive range of fashion clothing and all types of products on amazing discounts. There are also waffle offers provided to the buyers. The mall provides exquisite shopping experience to the local buyers.

Weaknesses: The competition is high in the retail shopping, especially as there are several types of malls exist in the area and a few of these have international character too. Since the competition is high, buyers get better choices of products at various places.

Opportunities: The shopping mall is offering innovative opportunities to the buyers by providing them with niche buying opportunities. Some of these opportunities include gift packaging, discounts etc.

Threats: Low cost products found in the retail shops may attract the consumers, but this may pose great threats to the business as many buyers who are investing money may have poor quality products. This will result in consumer distress.

Methodology Implied:

The entire study implied is on the basis of secondary data from corporate and the annual financial reporting published in websites and other company auditing reports. The secondary source of data collected was also instrumental in making a fair judgment of the corporate functioning.

Performance Measure of Shipra Shopping Mall

Shipra is among the few elitist of the malls that brings with it essence of beauty and charm of the Roman heritage. The mall has an overwhelming 15000 Square feet of Food Court, 17,000 Square Feet of KIDS ZONE, and 3 New Generation Cinema Halls and a well-equipped amphitheater. Shipra Shopping Mall has two Atriums providing a niche and exclusive space for high visibility.

There are more than 200 retail shopping stores available and a huge catchment area. Shoppers have easy access to the inside of the mall. The exit from the mall is also comfortable as it is in the vicinity of the metro station.

Conclusion

Shipra Shopping Mall, Indirapuram is a classy and grand shopping that has everything and designed for every big and small shopping purpose. Whether it is about the new age restaurant, or ethnic style, you are going to find it right here.

The Great India Palace

The Great India Palace also known as the GIP Mall is an amazingly sprawling retail shopping space strategically located in Sector – 18, Noida. The total area of the mall is 5 Lakh Square Feet. The covered area of the mall is 2,1 Square Feet. It is a South West facing mall with a single building block. GIP is ranked among the biggest of the shopping malls.

Methodology Implied:

The entire study implied is on the basis of secondary data from corporate and the annual financial reporting published in websites and other company auditing reports. The secondary source of data collected was also instrumental in making a fair judgment of the corporate functioning.

SWOT Analysis:

Strengths: The mall has spacious retail stores, which deal in all kinds of kids and clothing products. You can easily look out for the best and innovative deals of fashion clothing and other valuable products.

Weaknesses: The mall is in the vicinity of other big sized shopping malls and this result in direct competition and diversion of business.

Opportunities: The shopping mall provides endless shopping opportunities to the consumers and it lists from a whole new range of products and services.

Threats: Since many of the retail shopping stores in the mall work on the concept of selling cheap products, which come at low pricing, but quality of such products is not competitive or relate to the international retail standards.

Performance Measure of the Great India Palace

Shopping at The Great India Palace is all about the fun and excitement. The shopping mall provide customers with electronic directories are available on the floors; child safe shopping, baby care zone, Free Wi Fi, Medical Assistance, ATMs, Valet Parking for 1500 cars, which includes basement and surface parking. There are 1 Pair of Lifts and 14 Escalators, Centrally Air-conditioned with 4 Circular Atriums Provided. The Great India Palace also provides 1 Pair of Capsule Lifts, Multiplex with 4 Screens and there are approximately 200 Retail Shops.

Conclusion:

GIP Mall is a complete shopping city where shoppers will have fun and excitement while they are busy shopping. The mall is also suited for kids strolling as well. It is indeed a place to enjoy a pleasurable shopping experience.

Comparative Analysis of the Shopping Malls

Name of the Mall	Materials and Fenestrations	Circulation Pattern	Ventilation	Children Friendly	Generation
Future Group	RCC framed structure. Sealed Glass panels	Atrium Available

Passage along the shops are also provided. | HVAC Provided//Clean and Breathable Air 24/7/365 Days | Kids Zone Available and therefore safe for the Kids | Young and Old |
| **Shipra Shopping Mall** | RCC framed structure. Sealed Glass panels with Open Windows on the Ceiling | Atrium Available

Passage along the shops is also provided. | HVAC Provided//Clean and Breathable Air 24/7/365 Days | Kids Zone Available and therefore safe for the Kids | Young and Old |
| **The Great India Palace** | RCC framed structure. Sealed Glass panels with Open Windows on the Ceiling | Atrium Available

Passage along the shops are also provided. | HVAC Provided//Clean and Breathable Air 24/7/365 Days | Kids Zone Available and therefore safe for the Kids | Young and Old |
| **Ambience Mall** | RCC framed structure. Sealed Glass panels with Open Windows on the Ceiling | Atrium Available

Passage along the shops are also provided. | HVAC Provided/Clean and Breathable Air 24/7/365 Days | Kids Zone Available and therefore safe for the Kids | Young and Old |

Analysis and Discussion

While the spread of mall culture has given a phenomenal boost to retail shopping in tier 1, tier 2 and tier 3 cities in India, there lies slurry of weaknesses in operations, which if corrected managed and efficiently modified, shall work in a beneficial way for the consumers and everyone else.

Shipra Shopping Mall and Ambience Mall are spacious enough to hold a daily traffic of 7000 to 10000 retail consumers, but there is significant lack of pedestrian-friendly access way. These types of access ways provide an easy route to exit in case of emergency situations when the electronics and electricity fails. Moreover, pedestrian friendly access ways provide the safest route to old citizens, since they are slow movers and many of them suffer from delirium.

The Great Indian Palace and The Future Group have provided several easy exit ways, which are also convenient for the older population in the times of emergency. Shipra Mall and Ambience Mall has spacious multi floor level parking facilities, but on busy days, these spacious parking facilities turn up against the consumers as they cannot find the floor on which they have parked the vehicle. This gives an utter sense of confusion leading to time waste and development of erratic sense of behaviour.

In addition, Shipra Mall has over crowded corridors and hallways on weekends, when the frequency of consumers to the mall increases rapidly. This growth may further hamper the growth of consumers, who are there out there with a shopping purpose.

The ease of shopping in these malls is seriously affected as the prospective consumers reach the levels of forgetfulness, and where the decision making process becomes too perplexed at times.

The Great Indian Palace and The Future Group have sufficient moving g space and their parking facilities are also less confusing and quite well organized. More importantly, in these malls, there has been emphasis laid on the young population and their buying interests. Therefore, a young buyer may come across many options around that are quite perfect to meet their routine needs than anything else.

Suggestions

Shopping experience in the malls in Delhi is superbly amazing, but this does not mean, that the shopping experience cannot be improved. The malls functioning in Delhi are required to undertake a few confidences building measures, which if not taken would not enhance the shopping experience and this may lead to refrainment.

Malls in Delhi do not have smart technology to detect the pollution control levels and weather forecasting system. There is also the absence of smart lighting controls, and if this important technology equipment is installed, this would not only increase the shopping experience but would also give a superior mall value.

Another crucial fact is that consumers visiting the mall do not only require a great shopping experience, but they are yearning for an atmosphere where quality leisure as well as creative entertainment activities is also hosted in the form of interesting games. This would boost up the enjoyment of accompanying members.

The malls in Delhi have good balance of domestic and international brands, but lack greatly on the funky stores, which could otherwise raise the attraction and entice the consumers to buy off the league products.

There is a good option to include the Pop Up stores in the malls. It gives out the multi-sensory familiarity while living with an engaging experience.

And last suggestion is that malls should adopt the culture of fair shopping and affordable shopping instead of including the haute couture. Although there are food courts, but these are expensive to eat around. More importantly, the rush in mall traffic should be managed properly to allow smooth movement and easy manoeuvrability.

Conclusion

The research paper concludes that shopping behavior of younger lot at the hi tech malls is not influenced by demographic factors. In today's scenario the younger generation visiting the malls are driven by attraction and lust to socialize. The shopping behavior of such individuals is not affected by faculty, residence, caste, religion or economic status. These malls have become breeding grounds for arranging the meetings and window shopping. Most of the times the younger lot who visit the malls are not interested in buying at all. Therefore, to conclude, the malls are resourceful in driving the opinion of younger generation, and give them a kind of free environment to be their real self.

Acknowledgements

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अभिज्ञानशाकुन्तलेसनातनसंस्कृतिः

डा. ज्ञानरंजनपण्डा

सहाचार्यः,साहित्यविभागः, राष्ट्रियसंस्कृतविद्यापीठम्
तिरुपतिः, आन्ध्रप्रदेशः।

भारतीयसंस्कृतौ नीतिपरकव्यवहारज्ञानस्य वैशिष्ट्यं समाजस्य पदे पदे नितरां दरीदृश्यते। परोपकाराय पुण्याय पापाय परपीडनम् इत्युक्तिः भारतीयानां जीवनदर्शनम्। त्यागवलिदानस्य इयं पुण्यभुमि अन्यस्य समाजस्य देशस्य वा हिताय सदा कार्यरतो स्वात्मानं समर्प्यते। व्यवहारसंस्कारस्य समुचितवैज्ञानिकपद्धतिमनुसृत्य न केवलमत्र ग्रन्थाः निर्मिता अपि च असारसंसारस्य जीवनदर्शनमहत्त्वमुपदिष्टम्।

सारस्वतप्रपंचे संस्कृतसाहित्ये वेदोपनिषदधर्मदर्शनव्याकरणालंकारादिषु शास्त्रेषु समाजव्यवहारनयः सम्यकालोचितः। सामाजिकव्यवहारपरिपालने न केवलं सांसारिकाणां ज्ञानं अपि च आश्रमवासीनां तपस्वीनां ज्ञानं भवेदीति महाकवि कालिदासेन अभिज्ञानशाकुन्तलनाटके सम्यगुपस्थापितम्। काव्येषु नाटकं रम्यं तत्र रम्या शकुन्तला इत्यस्मिन् वाक्ये अस्य महत्त्वमनुभुयते। अस्य नाटकस्य पठनेन सहृदयानां स्वर्गीयानन्दः लभतेति पाश्चात्यानां कथनम्। अनेन श्लोकेन ज्ञातुं शक्यते।

वासन्तं कुसुमं फलं च युगपत् ग्रीष्मस्य सर्व च यत्
यच्चान्यन्मनसो रसायनमतः सन्तर्पणं मोहनम्।
एकीभूतमभूतपूर्वमनसा स्वर्लोकभूर्लोकयोः
रैश्वर्यं यदि वांच्छसि प्रियसखे शाकुन्तलं सेव्यताम्।।

महाकवि कालिदासस्य अनुपमकृतिषुइयमनन्या कृति समग्रसारस्वतप्रपञ्चे प्रसिद्धिमवाप। वहु षु भारतीय प्रान्तियभाषाषु अस्यानुवादः कृतः अपि च वैदेशिकभाषाषु अनुदितः सञ्जातः। भारतीय प्राचीनसंस्कृतेः सामाजिकनीतिशास्त्रव्यवहारज्ञानस्य निदर्शनं अत्र प्रकटितम्। यद्यपि संस्कृतं विना भारतस्य सनातनधर्मस्य च स्थानं कल्पयितुं न शक्यते एवं च संस्कृतस्य संस्कृतिसम्पन्नस्य व्यवहारिकज्ञानविज्ञानस्य भाण्डागारं अत्रैव समुपलभ्यते।सर्वप्राचीना इयं भाषा विज्ञानसम्मता तथा भारतस्यसमस्तप्राचीनसंस्कृतेः मुलरुपेण निहितमस्ति। चत्वारः वेदाः, चत्वारः उपवेदाः, षड् वेदाङ्गानि, षड् दर्शनशास्त्राणि, अष्टादशस्मृतयः अष्टादशपुराणानि, उपपुराणानि, रामायण-महाभारते निखिलज्ञानमत्रमुपलभ्यते।

अभिज्ञानशाकुन्तलनाटकेऽस्मिन् भारतीय प्राचीनज्ञानपरम्परायाः निदर्शनमुपस्थाप्यते। गुरुकुलशिष्यपरम्परा, प्राचीनशिक्षापद्धति, नारीसमान्ननम् शिक्षादानं च, राज्यशासनपद्धतिः, प्रकृतिसंरक्षणं,अतिथिसेवा राजधर्माचरणमादयः अत्र सुष्ठु कालिदाशेनोपस्थापितः।
अस्मिन् प्रवन्धे अभिज्ञानशाकुन्तलनाटके आश्रमनिवासी तपस्वी कण्वमहर्षेः संसारज्ञानमत्र महत्त्वपुर्णमिति उपस्थाप्यते। ब्रह्मचारीमुनिकण्वः कथं पालिता कन्या शकुन्तलायाः विरहपीडामनुभुय रोदनं अकरोत् इति सम्यक् वर्णितम् कालिदासेन। नारिणां स्थानं अस्माकं

समाजे सदैव उच्चतममिति मनुना मनुस्मृतौ उक्तम्। 'यत्र नार्यस्तु पुज्यन्ते, रमन्ते तत्र देवता' इति। नवयौवनाशकुन्तलायाः विवाहस्य प्राक् कण्व महर्षिः सोमतीर्थम् प्रति अगच्छत्। अत्रान्तरे पुरुवंशसमाट् चक्रवर्त्ति राजा दुष्न्तेन शिकारार्थमागत्यमहर्षिकण्वाश्रमे शकुन्तलया सह साक्षात् अकरोत्। यः सम्वन्धः गान्धर्वविवाहेन परिणतः। तदनु राजा स्वराज्यम् प्रति प्रत्यावर्तनमकरोत्। सोमतीर्थादागत्य मुनिः कण्वः ध्यानेन सर्वमुदन्तं अजानत्। सानन्देन निसर्गकन्यां शकुन्तलां श्वशुगृहं प्रेषयितुं अइच्छत्।

मेनकाविश्वामित्रयोः लव्धजन्मा शकुन्तला। तस्याः जननान्तरं विश्वामित्रः तपः कर्तुं, मेनका च इन्द्रसभां गतवन्तौ। शकुन्तलपक्षिभिः लाल्यमानां बालिकां कण्वमहर्षिः आश्रमम् आनीय पालितवान्। तत्र कारणं सामाजिकव्यवहारः इति कालिदासस्य अभिप्रायः। कण्वमहर्षिः ब्रह्मचारी अपि पालितपुत्र्याः शकुन्तलायाः विवाहप्रयत्नः इत्यादयः समाजोपचारः एव। गान्धर्वविवाहं कृतवती चेदपि लज्जया विनम्रशिरस्कां शकुन्तलां लालनया पिता काश्यपः अभिनन्दितवान्। दिष्ट्या धुमावरूद्धदृष्टेरपि यजमानस्य आहुतिः पावक एव पतिता। विवाहिता पुत्री पितृगृहेअधिककालं न स्थापनीया, श्वशुरगृहे प्रेषणीया इति कण्वस्य अभिप्रायः आधुनिककाले आचरणिया एव खलु।

पितृभारः कन्याप्रीतीश्च

कन्या जननानन्तरंगृहस्थस्य जातकर्मादिकं कृत्वा विद्यां बोधयित्वा, यदा सा यौवनवती भवति तदा तस्याः विवाहं कारयितुं प्रयतते। विवाह-प्रयत्नेषु पिता मग्नः चेदपि विवाहानन्तरं सा श्वशुरगृहं गमिष्यति इति चिन्तनेन तस्याः मातापित्रोः मनंसि दुःखकवलितानि भवन्ति। एतं समाजोपचारविषयं कालिदासेन अत्यन्तमनोहरमुपस्थापितम्। एकस्य पितुः समग्रजीवने पुत्री स्नेहः प्रेमाधिक्यं च सदैव स्मारयति। तस्याः अभावः पितरं जडी करोति अर्थात् पितुः मुकवत् व्यवहारः कन्याविरहपीडां जनयति। जन्मादारभ्य परिवारस्य सुःखदुःखैः सह संशिलष्टा सा अद्यान्तर्हिता भवेदिति पितुः महती चिन्ता। मनोवेदना कथं वा प्रकट्यतेति अरण्यनिवासिमुनिकण्वस्य मनोदशा कालिदासेन सम्यक् वर्णितम्। स्वपुत्र्याः श्वशुरगृहगमनदुःखं कथं पीडादायकमिति नानुमितुं शक्यते, यतोहि अत्र कण्वरुषेः पालितकन्या शकुन्तला। तस्या आश्रमागामानन्तरं मुनिकण्वस्य कार्यभारः न्युनः जातः। आश्रमस्य प्रमुखो भारः तस्या इति सखीमुखात् ज्ञायते। उद्यानवृक्षेषु जलसेचनं, पुष्पचयनं, देवपुजनं अतिथिसेवादायः कार्यभारः पुत्रीशकुन्तलायाः आसीदिति स्वयं कण्वः श्वशुगृहगमनप्रसङ्गे वर्णयति –

पातुं न प्रथमं व्यवस्यति जलं युष्मास्वपीतेषु या
नादत्ते प्रियमण्डनापि भवतां स्नेहेन या पल्लवम्।
आद्ये वः कुसुमप्रसूतिसमये यस्या भवत्युत्सवः
सेयं याति शक्तुन्तला पतिगृहं सर्वैरनुज्ञायताम्।। (अ.श.4.11)

अत्र मुनिकण्वस्य न केवलं कन्याप्रीति अपि च प्रकृतिसुरक्षाव्यवस्थिता भवेदिति कालिदासस्याशयः। यद्यपि निसर्गकन्याशकुन्तला उद्यानवृक्षाणां जलसेचनादि निरन्तरसेवां करोति स्म, पुष्पालंकारधारणे अत्यन्तप्रीतमना सा कुसुमचयने व्यथितहृदया दृश्यते। लतापुष्पेषु स्नेहाधिक्यमत्र वैशिष्ट्यम्। वृक्षाणां जलसेचनं विना तया अपि जलपानं न क्रियते। भवत्सु

स्नेहसौहार्द्यं मम कन्यारत्नस्य विशेषगुणोपेतमिति कण्वस्योक्तिः अत्र ध्यातव्या। मुनिकण्वेन चेतनाचेतनज्ञानं विस्मृत्य वृक्षेषु आशीर्कामना इच्छेत्। सा मम शकुन्तलायाः पतिगृहगमने भव तां आशीषः अनुमतिं च प्रदेया।

अत्र कालिदासेन प्रकृतिसुरक्षां वर्णितम्, तथैव संस्कृतिरक्षणमुक्तम्। सर्वेभ्यः आशिर्भ्यः कार्यसाधनं सफलतां च प्राप्तुं शक्यतेति भारतीयसंस्कृतेः सामाजिकव्यवहारज्ञानम्।
शाकुन्तलनाटके चतुर्थाङ्के श्लोकचतुष्टयेषु प्रथमः श्लोकः-

यास्यत्यद्य शकुन्तलेति हृदयं संस्पृष्टमुत्कण्ठया
कण्ठः स्तम्भितवाष्पवृत्तिकलुषश्चिन्ताजडं दर्शनम्।
वैक्लव्यं मम तावदीदृशमिदं स्नेहादरण्यौकसः
पीड्यन्ते गृहिणः कथं नु तनयाविश्लेषदुःखैर्नवैः।

अद्य शकुन्तला श्वशुरगृहं गच्छतीति विषयं चिन्तयतः मम हृदयं उत्कण्ठभरितम् अभवत्। अश्रुभिः कण्ठः वाष्परुद्धः अभवत्। मम पुन्र्याः विरहदुःखं स्मरामि चेदेव मम चक्षुः अश्रुपूर्णं जायते। यद्यपि अहं सर्वसङ्गपरित्यागि, तपस्वी, तथापि ममैव पुत्रीप्रेम्णा एतावत्दुःखं जायते चेत् गृहस्थाः पुन्र्याः श्वशुरगृहगमनसमये विरहवाधया कीदृशीं पीडामनुभवन्ति इति चिन्तयितुं न शक्यते इति कण्वमुनेः मनः शोकाभिभूतो जायते।
श्वशुरगृहं प्रति पुन्र्याः प्रेषणसमये जामातरं दुष्यन्तं प्रति वक्तव्यानि वचनानि शिष्यान् एवम् अवदत् कण्वमहर्षिः।

अस्मान्साधु विचिन्त्य संयमधनानुच्चैः कुलं चात्मन-
स्त्वय्यस्याः कथमप्यबान्धवकृतां स्नेहप्रवृत्तिं च ताम्।
सामान्यप्रतिपूर्वकमियं दारेषु दृश्या त्वया
भाग्यायत्तमतः परं न खलु तद्वाच्यं वन्धूबन्धुभिः।।

हे राजन्। आत्मसंयमनधनान् अस्मान् सम्यक् चिन्तयतु। भवतः वंशस्य औन्नत्यमपि चिन्तयतु, बन्धुजनानाम् आवश्यकतां विना त्वयि तस्याः स्नेहप्रवृत्तिं चिन्तयतु। सर्वान् विषयान् सम्यक् परिशिल्य तस्याः भवतः दारेषु सामान्यप्रतिपत्तिं कल्पयतु। किन्तुं भार्यायाः स्थानापेक्षया अन्यत् स्थानं मा कल्पयतु। बन्धुबन्धुभिः इतोपि अधिकं न वक्तव्यम्। इतोपि अधिकं सा प्राप्स्याति चेत् तस्याः सौभाग्यमेवः इति।
हे राजन्। अस्माकं पुत्री भवान् सम्यक् पश्यति चेत् भवते लाभः अथवा शुभं भवति। तस्यै उत्तमं स्थानं न कल्पयति चेत् भवतः कृते अशुभं भविष्यति। इति सुचना अन्तर्लिनतया कालिदासेन उक्ता।
श्वशुरगृहगमनसमये पुत्रीं प्रति उत्तमविषयवचनं सामाजिकसम्प्रदायं कालिदासः कण्वमहर्षिणा एवं वाचितमान्।

शुश्रूष्स्व गुरून्कुरू प्रियसखीवृत्तिं सपत्नीजने
भर्तुर्विप्रकृतापि रोषणतया मा स्म प्रतीपं गमः।

भूयिष्ठं भव दक्षिणा परिजने भोगेष्वनुत्सेकिनी

यान्त्येवं गृहिणीपदं युवतयो वामाः कुलस्याधयः।।

पतिगृहपरिवारे ज्येष्ठानां गौरवं देयम्। तव सपत्नीभिः इष्टसखी इव व्यवहर, तव पतिः त्वां कुप्यति चेत् रोषेण त्वं तस्य इष्टमतिरिच्य मा चरतु। तव परिजनेषु परोऽपरभावना मा स्थापयतु। समभावं सर्वान् प्रदर्शयतु। राजसुःखेषु गर्वमावहतु। एतया विधया प्रवर्तिताः स्त्रियः गृहिणीपदं प्राप्नुवन्ति। एतद्भिन्नतया प्रवर्तिताः स्वकुलानां मानसिक-व्याधयः भूत्वा पीडयन्ति इति। मातापितरौ एतेन रूपेण पुत्री अधुनापि बोधयतः इत्युक्ते कालिदासः कीदृशम् उत्तमं विषयं स्वस्य नाटके वर्णयतिति चिन्तयितुं शक्नुमः।

पतिगृहं गच्छन्ती पुनः कदा आश्रमं प्रति आगन्तव्या इति सूचयति कण्वमहर्षिः श्रूयताम् पुत्रि। चिरकालं त्वं दुष्यन्तमहाराजस्य चतुस्समुद्रपर्यन्तस्य राज्यस्य सपत्नी भूत्वा, अप्रतिरथे दुष्यन्तस्य औरसे राज्यभारं समर्प्य पत्या सह प्रशान्ते एतस्मिन्नाश्रमे पुनः पादं स्थापय इति।

कन्यागमनानन्तरं कथं स्मरणं जायतेति कण्वस्योक्ति यस्य कस्य पितृहृदयविदारितुं समर्थः –

शममेष्यति मम शोकः कथं नु वत्से त्वया रचितपुर्वम्।

उटजद्वारविरुद्धं नीवारवलिं विलोकयतः।।

गच्छ । शिवास्ते सन्तु पन्थानः।(अ.शा.4.23)

पितृहृदयस्य दारुणव्यथा कन्या पिता ज्ञातुं प्रभवति। पर्णकुटीरस्य द्वारदेशे त्वया निर्मितं नीवारवलिदर्शनं मम प्रति मुहुर्तस्य विरहव्यथां द्विगुणितं करिष्यति। कथं वा तत् सोढुं शक्नोमि? अनेन रोदनेन करुणस्य पितृहृदयस्यानन्दः अपि जायते। कन्या पिता तस्य समग्रस्य जीवनस्य पुण्यश्रमफलमत्रैव व्यक्तिकृत्वा महान् कश्चन आनन्दानुभवः करोति।

अर्थो हि कन्या परकीय एव तामद्य संप्रेष्य परिग्रहीतुः।

जातो ममायं विशदः प्रकामं प्रत्यर्पितन्यास इवान्तरात्मा।। (अ.शा. 4.24.)

जीवे दया -

जीवे दया इत्युक्ति प्रकारं निसर्गकन्याशकुन्तलायाः आश्रमजीवेषु यः स्नेहः तदत्र प्रदर्श्यते । कुशाघातेन हरिणिशिशोः व्रणमुपशमितम् कदाचित्, अद्य श्वशुरगृहगमने शकुन्तलायाः मार्गावरोधः तेन क्रियते। पतिगृहगमनमवधामुत्पादयति मृगशिशुः बोधनीयः इति पितुः मुनिकण्वस्यादेशः। पशुनां मनांसि प्रत्युपकारभावना उद्रीयतेति अनेन कविना सम्यकालोचितः। कदाचित् आधुनिकसमाजे मनुष्येषु मानवीयमुल्यबोधः न दृश्यते यत् पशवः उपकारं न विस्मर्यन्ते। शकुन्तलायाः कृतोपकारं स्मृत्वा हरिणिशिशुः मानवसमाजस्य वार्ता प्रसारयति इति।

यस्य त्वया व्रणविरोपणमिङ्गुदीनां

तैलं न्यषिच्यत मुखे कुशसूचिविद्धे

श्यामाकमुष्टिपरवर्धितको जहाति

सोऽयं पुत्रकृतकः पदवीं मृगस्ते।।   (अ.शा.4.16)

शकुन्कलायाः मनसि पशुषु पुत्रैव भावना आसीत्। सा स्वयमेव आश्रमस्य सर्वाणि कार्याणि परिचालयति स्म ।   उद्यानस्य कार्यं, पर्णकुटीरस्य अतिथिभारः, पशुपक्षीणां मनोदशानुभवादि कार्यभारः शकुन्तला सम्यक् अकारि। इदानीन्तनकाले अत्याधुनिकसमाजस्य जीवनशैली परिवर्तितो लक्ष्यते। मूकजीवेषु दयाप्रदर्शनं न क्रियते चेत् प्रकृतेः सुरक्षा नैव जायते। इदानीं अस्य प्रभावः समग्रप्रपंचे परिलक्षते। प्राणघातककरोनारोगः विश्वस्य सर्वेषु देशेषु स्वकायां विस्तारयति, यस्य चिकित्साकौशलमपि वैद्यैः न ज्ञायते। अनेकेषु देशेषु लक्षाधिकाः जनाः अस्मिन् रोगे स्वप्राणविसर्जनं कृत्वा भारतीयसंस्कृतिं सनातनाभिमुखिं परिवर्धन्ते।

भारतीयसंस्कृतिसंरक्षणं राजधर्मपरिपालनं च -

सा संस्कृतिः विश्ववारा। भारतस्य अनन्या संस्कृतिः अस्य वैशिष्ट्यमेव। भारतस्य प्रतिष्ठा द्वे संस्कृतं संस्कृतिस्तथा। संस्कृतं अनवाप्य सनातनसंस्कृतिज्ञानं यथावन्नभवितुमर्हति इति तु वस्तुस्थितिः। प्राचीनकविनां रचनासु सनातनसंस्कृतेः गौरवं सम्यक् परिलक्षते। राजचक्रवर्तिस्वयं दुष्यन्तः सैनिकान् निवारयति आश्रमं गन्तुं । तपस्वीनः स्वीय दिव्यसाधनयासुर्यकान्तमणि इव शोभन्ते।

शमप्रधानेषु तपोधनेषु गूढं हि दाहात्मकमस्ति तेजः।
स्पर्शानुकूला इव सुर्यकान्तास्तदन्यतेजोऽभिभवाद्वमन्ति।। (अ.शा. 2. 7.)

अपि च

जाने तपसो वीर्यं सा वाला परवतीति मे विदितम्।
अलमस्मि ततो हृदयं तथापि नेदं निवर्तयितुम्।। (अ.शा.3.2.)

अध्यात्मविद्यायाः अन्तर्निहिताशक्तिविषये तदानीन्तन जननायकराजा सम्यक् स्वजनान् प्रवोधयति। ब्राह्मणानां गौरवं, अध्यात्मज्ञानस्य वैशिष्ट्यं स्वसंस्कृतेः रक्षणं सम्यक् उपदिशति कालिदासः। कदाचिद् भारतीया संस्कृतिः विश्वगुरुत्वेन सर्वविदितो आसीत्। मध्ये तावत् पाश्चात्यसंस्कृतिमनुसृत्य स्वदेशज्ञानं विस्मरति भारतीयः वहु समस्याषु सम्मुखीनसन् शिक्षादीनां प्राचीनपद्धतिनां पुनःप्रचलनकर्तुं प्रयतते। यथा आश्रमे गुरुकुलपरंपरायाः सर्वशास्त्रशिक्षादनं कृत्वा, शिष्यस्य मनसि स्वराष्ट्रप्रेमं जागरणं कारयित्वा, संसारस्य जीवनदर्शनं सुष्ठु वोधयित्वा गृहस्थाश्रमं कुलपति प्रेषयति स्म। यत्र शिष्यः विद्वान्, धैर्यवान्, राष्ट्रप्रेमीकुशलीच भवेत्।

भारते भारतीयेषु शासितुं गुरुकुलपरंपराविनाशमेव प्रमुखं कारणं भक्तीति आंग्लोशासकाः ज्ञात्वा तदनुगुणं कार्यं कृतम्। यस्य पाश्चात्यानुकरणरोगस्य प्रभावेण वयं अद्यापि पीडिताः।गुरुकुलाश्रमे आश्रमकार्याणि गुरोः आदेशेन शिष्याः सानन्देन कुर्वन्ति। सकलशास्त्रयुद्धविद्याभ्यासेन सह कृषिकार्यं, हवनकाष्ठसंग्रहकार्यं कृत्वा सर्वेषु गुणेषु नैपुण्यं प्राप्नुवन्ति। गुरुराज्ञा ह्यविचारणीया इत्युक्ति प्रसिद्धा। प्रथमे अङ्के वैखानसेन राजानं आश्रमं गन्तुं आमन्त्र्यते। राजन् । समिदाहरणाय प्रस्थिता वयम्। एष खलु कण्वस्य कुलपतेरनुमालिनीतीरमाश्रमो दृश्यते। न चेदन्यकार्यातिपातः,

प्रविश्यप्रतिगृह्यतामातिथेयः सत्कारः इति। अनेननकेवलं गुरुकुलपरंपरां अपि च सनातनसंस्कृतिं अतिथि देवो भवः इति मन्त्रस्य सार्थकं करोति।

गुरुकुलाश्रमे यज्ञहवनकार्यप्रतिदिनं क्रियते येन न केवलं शिष्यानां मनःसु दिव्यभावनामायाति अपि च परिवेशस्य रोगप्रतिरोधकशक्तिः वर्धते। कण्वाश्रमे प्रतिदिनं हवनकार्यं क्रियतेति तृतीये अङ्के वर्णितो वर्तते।

सायंतने हवनकर्मणि संप्रवृते
वेदिं हुताशनवतीं परितः प्रकीर्णाः।
छायाश्चरन्तिवहुधा भयमादधानाः
सन्ध्यापयोदकपिशाः पिशिताऽशनानाम्।। (अ.शा.3.24)
अपि च –
अमीं वेदीं परितःक्लुप्तधिष्ण्याः
समिद्वन्तः प्रान्तसंस्तीर्णदर्भाः।
अपघ्नन्तो दुरितं हव्यगन्धैः
वैतानास्त्वां बहवयः पावयन्तु।। अ.शा. 4.10.)

श्लोकेऽस्मिन् कण्वाश्रमस्य हवनकार्ये राक्षसानां वाधामुत्पादनं राज्ञः तन्निराकरणमिति वर्णितम्। अत्र न केवलं अस्माकं गुरुकुलपरंपरायाः संस्कृतिरुपलक्षिता अपि च राजधर्मस्य परिपालनं वर्णितम्। यद्यपि अस्मिन् समये राजा उपवने विरहपीडामनुभवन् चिन्ताग्रस्तः तथापि आश्रमस्य समस्यासमाधानं राजधर्मपालनस्य अङ्गविशेषः इति धिया भोः भोः मा भैषी, मा भैषी अहमागच्छामि इत्युक्त्वा प्रस्थियते। यज्ञस्य प्रभावः परिवेशं शोधयति अपि च अस्माकं मनः परिष्करोति। विवाहस्य पवित्रे कार्ये अग्निप्रदक्षिणस्य महत्वमत्र प्रदर्शितम्। राजधर्मपरिपालनस्य अन्यदेकमुदाहरणम् –

भानुः सकृद्युक्ततुरङ्ग एव रात्रिन्दिवं गन्धवहः प्रयाति।
शेषः सदैवहितभुमिभारः षष्ठांशवृत्तेरपि धर्म एषः।। (अ.शा. 5. 4)

राजा विना विश्रामं प्रजाकुलस्य मङ्गलमाचरणीयम् यथा सुर्यस्य अविश्रान्तगतिः, पवनस्य दिवारात्रि चलनं, शेषनागस्य विनाद्विधां भुभारः वहनं अस्य सेवाव्रतेः प्रमाणम्। अवनीपतेः अयं भारः तथैव परिपालनीयः यथैव सूर्यादिदेवाः स्व स्व कार्यं साधयन्ति। अद्यतन समाजस्य नेतृणां कालिदासस्य इदं वचनं प्रेरणादायकमित्युच्यते। प्रजाकुलस्य विपत्तौ संपत्तौ च राज्ञः उपस्थिति अनिवार्या भवेत्। राष्ट्रस्य प्रजाः कदापि असाहायानुभवः न करणीयाः।

षष्ठे अङ्के दुष्यन्तेन वार्ता प्रसार्यते यत् मम राज्यस्य प्रजाः न असहायाः। सर्वत्र इयं वार्ता प्रसारयतु यत् अहं दुष्यन्तः सर्वस्य प्रजाकुलस्य सहायकत्वेन उपस्थितोऽस्मि।

येन येन वियुज्यन्ते प्रजाः स्निग्धेन वंधुना।
स स पापाद्दते तासां दुष्यन्त इति घुष्यताम्।। (अ.शा. 6. 23)

राज्यशासनं राजसिंहासने उपवेशनं न सुःखकरमिति कालिदासेन प्रमाणीक्रियते। कदाचित् इदानीन्तन नेतारः राजसिंहासने अभिसिक्तो नाम परमसुःखदानुभवः इति स्वीक्रियते। सिंहासने उपविश्य धनोपार्जनं करणीयम्। स्वजनानां मङ्गलविधानम्, इतरैः सह शत्रुवदाचारणम् अद्यतनस्य नेतृणामुदाहरणम्। परन्तु अत्र पंचमाङ्के कालिदासः राज्ञः मनोदशा कथं भवेदिति वर्णयति -

औत्सुक्यमात्रमवसाययति प्रतिष्ठा
क्लिश्नति लव्धपरिपालनवृत्तिरेव।
नातिश्रमापनयनाय यथा श्रमाय
राज्यं स्वहस्तधृतदण्डमिवातपत्रम्।। (अ.शा.5.6.)

राज्ञः सिंहासनप्राप्ति उत्कण्ठाशमनमेव, परन्तु राज्यपरिपालने महती चिन्ता परिलक्षते। कष्टकरं व्यापारम् शासनदण्डविधानम्। राज्यपरिपालनस्य गुरुभारः सदैव पीडादायकः। आतपे यथा छायात् छत्रदण्डस्य सहनभारः अधिकः संजायते तथैव राज्यशासने राज्ञः शासनदण्डभारः अधिकः पीडादायकः।

स्वसुखनिरभिलाषः खिद्यसे लोकहेतोः
प्रतिदिनमथ वा ते वृतिरेवंविधैव।
अनुभवति हि मुर्धना पादपस्तीव्रमुष्णं
शमयति परितापं छायया संश्रितानाम्।। (अ.शा. 5. 7.)

राजधर्मपरिपालने राज्ञः जीवनं कथं कष्टकरमिति तदत्र पंचमे अङ्के वर्णितो अस्ति। राजा स्वयं समस्तं कष्टं सोढ्वा प्रजाकुलस्य सर्वसुःखप्रदाने निरन्तरप्रयासः करणीयः। यथा महाद्रुमः सुर्यस्य अत्युष्णं पीडां सहनं कृत्वा आश्रितान् शीतलछायां प्रयछति तथैव राज्ञः स्वभावः भवेत्।

अपि च –
नियमयसि विमार्गप्रस्थितानातदण्डः
प्रशमयसि विवादं कल्पसे रक्षणाय ।
अतनुषु विभवेषु ज्ञातयः सन्तु नाम
त्वयि तु परिसमाप्तं बन्धुकृत्यं प्रजानाम्। (अ.शा. 5. 8.)

सुःखदुःखसमयेषु मित्रैवोपस्थितिः, विवादकलहेषु विना पक्षपातसमाधानं, धनोपार्जने मार्गप्रदर्शनं इत्यादिषु कार्येषु मित्रैव समाचार्यते चेत् तद् राजधर्मपरिपालनमिति ज्ञायते।

पतिव्रतानारी –

भारतीयसंस्कृतौ पतिव्रताचारणं नारीणां विशिष्टेषु गुणेषु अन्यतमः। नारीणां गौरवं भारतीयसमाजे वैशिष्ट्यमावहति। सा अस्मान् माता-भगिनी-पत्नी-पुत्रीत्वेन जीवनस्य प्रतिपदेषु सहायं कृत्वा साफल्यं कारयति। सर्वसहा सा सर्व कष्टं सोढ्वा परिवारस्य समाजस्य राष्ट्रस्य समुन्नतये प्रगतये च निरन्तरकार्य करोति। अभिज्ञानशाकुन्तले शकुन्तला सहनशक्तिः,शालीनता,

क्षमाशिला-वीरप्रसवीनि धैर्यशौर्यसौन्दर्यस्य प्रतीकभुता। राजादुष्यन्तेन कण्वाश्रमात् यदा प्रस्थियते तदा पुनः कदा मेलनं इति प्रस्नस्य समाधाने उत्तरयति राजा–

एकैकमत्र दिवसे दिवसे मदीयं
नामाक्षरं गणय गछसि यावदन्तम्।
तावत् प्रिये मदवरोधगृह्हप्रवेशं
नेताजनस्तवसमीपमुपैष्यतीति।। (अ.शा., 6-12.,)

कण्वाश्रमादागामनान्तरं दुष्यन्तविरहवेदनां अनुभवती शकुन्तला आश्रमे पतिव्रताव्रतमाचरति। कण्वस्य पतिगृह्हप्रेषणे अपि च शापवशात् दुष्यन्तस्य प्रत्याख्यानमपि शकुन्तला मौनेन सहते। तदनु मारीचाश्रमे पुत्रजननं परिपालनं पतिविरहव्रतपालनं सम्यक् अकारि। पतिविच्छेदे सा शरीरसौन्दर्यप्रसाधानं न लेपते। वहु प्रियपुष्पालंकारधारणं न क्रियते। मलिनवस्त्रधारणं एकवेणीवंधनं, उपवासादिव्रताचरणे क्षीणशरीरमावहति शकुन्तलां दृष्ट्वा दुष्यन्तस्य उक्तिरियम्।

वसने परिधुसरे वसाना नियमक्षाममुखी धृतैकवेणिः।
अतिनिष्करुणस्य शुद्धशीला मम दीर्घं विरहव्रतं विभर्ति।। (अ.शा. 7 – 21)

धैर्यक्षमायाः निदर्शना सा शकुन्तला दुष्यन्तेन सह मेलने जयतु जयतु आर्यपुत्रः इति सवाण्पकण्ठे निगदति। अत्र भारतीयसनातनसंस्कृतियुक्तनार्याः क्षमाशक्तेः प्रमाणमुपलभ्यते। शकुन्तलां पुत्रस्य प्रश्नः मातः क एषः .....उत्तरयति माता वत्स ते भागधेयानि पृच्छ इति। अत्र शकुन्तला न कुपिता अपि च शान्तसरलस्वभावस्य परिचयं सृजति। सर्वसहा सा नारी अस्माकं संस्कृतौ स्वर्गादपि गरीयसि इति वर्णना रामायणे उपलभ्यते।

अपि स्वर्णमयी लङ्का लक्ष्मण मे न रोचते ।
जननी जन्मभुमिश्च स्वर्गादपि गरीयसि।।

त्यागवलिदानस्य मूर्तिमतीप्रतीका सा चिरवन्दनीया नमनीयाश्च। मातृवियोगीनि शकुन्तला वाल्यादेव जीवनसंघर्षं कृत्वा साफल्यं प्राप्य नारीशक्तेः आदर्शस्य अनन्योदाहरणम्। आदर्शजननी-प्रकृतिपुत्री-पतिपरायणालावण्यवतीशकुन्तलामुनिकण्वस्य मूर्तिमतीव सत्क्रिया । असामान्या सुन्दरी सा निसर्गकन्या पतिपरायणा वीरप्रसविनी सर्वगुणसंपन्ना शकुन्तला इदानीन्तनाधुनिकनारीसमाजस्य शक्तिसंभुताप्रतीकभूता यथा दुष्यन्तेन -

मानुषीभ्यः कथं नु स्यादस्य रुपस्य संभवः।
न प्रभातरलं ज्योतिरुदेति वसुधातलात्। (अ.शा. 1.23)

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सञ्चिता पात्र

गवेषिका छात्री –एम् .ए. नेट् ,बि.एड्

भूमिका

" **काव्यशास्त्रम्** ' " **साहित्यशास्त्रम्**" चेति शब्दद्वयमस्माकं सुपरिचितमस्ति ।परन्तु कथमीदृशनामकरणं, किं वा शास्त्रं ,किञ्च शास्त्रद्वयोर्मध्ये नामकरणे अन्तरम् इत्यस्मिन्विषये एका आलोचना यथा मयात्र संकलिता तथैव काव्यशास्त्ररूपस्य सौन्दर्यशास्त्रस्य नामान्तराणि कानि इत्यस्मिन्विषयेऽपि अत्र आलोचितानि मया ।

काव्यशास्त्रमित्यस्य शब्दस्यार्थः

"**काव्यशास्त्रम्** "इत्यस्य शब्दस्य व्युत्पत्तित्रयं प्राप्यते ,यथा –

१) **काव्यं च तत् शास्त्रम्, काव्यशास्त्रम्** "इति ।कर्मधारयसमानिष्पन्नस्य अस्य शब्दस्यार्थः – काव्यस्वरूपं

शास्त्रम् ।

२) **काव्यं च शास्त्रं च काव्यशास्त्रे, तयोरुक्तानां शब्दानां निरुक्तिः ,काव्यशास्त्रोक्तशब्दानां निरुक्तिः**
द्वन्द्वान्वितेन अनेन तत्पुरुषसमासेन अर्थो भवति –काव्ये शास्त्रे च प्रयुक्तानां शब्दानां निरुक्तिः ।ईदृशः द्वन्द्वान्वितः शब्दप्रयोगः दृश्यते इत्येवम् –

> " **काव्यशास्त्रविनोदेन कालो गच्छति धीमताम् ।**
>
> **व्यसनेन च मूर्खाणां निद्रया कलहेन वा** "॥ इति ।

अस्मिन् श्लोके काव्यं शास्त्रञ्चेति अर्थद्वयमपेक्षितमस्ति । एवम्प्रकारेण आचार्येन मम्मटभट्टेनापि प्रयुक्तमित्येवम् –

> " **शक्तिर्निपुणता लोकशास्त्रकाव्याद्यवेक्षणात् ।**
>
> **काव्यज्ञशिक्षयाभ्यास इति हेतुस्तदुद्भवे** "॥इति ।

अत्र शास्त्रं काव्यञ्च शब्दद्वयं स्वतन्त्ररूपेण उल्लिखितमस्ति ।

३) **काव्यस्य शास्त्रम्, काव्यशास्त्रम्** ।षष्ठीतत्पुरुषसमासेन अस्यार्थो भवति –काव्यस्य शास्त्रम् अथवा

काव्यसम्बन्धितं शास्त्रम् ।"**शिष्यतेऽनेनेति शास्त्रम्** 'अनेन व्युत्पत्या काव्यविषये शिक्षादानकारी ग्रन्थः एव काव्यशास्त्रम् भवति ।यथा –व्याकरणशास्त्रम् ,भाषाशास्त्रम् ,व्युत्पत्तिशास्त्रञ्चेत्यादिरूपेण प्रयुक्तं भवति ।

उपर्युक्तेषु अर्थत्रयेषु प्रथमोऽर्थः अत्र नाभिप्रेतः ,यतः मम्मटाचार्येन **"लोकशास्त्रकाव्याद्यवेक्षणात्'** इत्यनेन शास्त्रं काव्यञ्चेति शब्दद्वयं पृथग्रूपेण प्रयुक्तं भवति , येन काव्यं न शास्त्रमिति ज्ञातं ,शब्दद्वयस्य भिन्नसता विद्यते । अस्मिन्नर्थे ग्रहणे कृते सति **"अप्रयुक्त"** इति दोषः भवति, यतःव्युत्पत्तिगतेऽर्थेऽपि ईदृशः शिष्टप्रयोगो न् दृश्यते ।

द्वितीयः अर्थोऽपि अत्र नाभीष्टः ।यद्यपि अस्मिन्नर्थे काव्यशास्त्रमिति शब्दः प्रयुक्तो भवति तथापि अनेन अर्थेन सर्वं काव्यं तथा सर्वं शास्त्रं गृहीतं भविष्यति ।काव्यग्रन्थस्य शास्त्रग्रन्थस्य च संख्या अपिरिमिता ।

अतः तृतीयः अर्थः एव अभीष्टः ।अर्थात् काव्येषु शासनकारी अथवा काव्यशिक्षादानाकारी ग्रन्थः एव काव्यशास्त्रमित्यनेन शब्देनाभिप्रेतः ।

काव्यशास्त्रस्य नामकरणम्

काव्यसौन्दर्यानुसन्धानकारी शास्त्रमेव काव्यशास्त्रम् ।अस्यार्थे काव्यशास्त्रस्य प्रारम्भिकयुगात् मुख्यरूपेण "**काव्यालंकारः**" इति शब्दः प्रयुक्तो भवति ।अनेन कारणेन आद्ये सर्वे आचार्याः स्वकीयस्य ग्रन्थस्य नाम "**काव्यालंकारः**" इति प्रयुज्यन्ते ।यथा –कारिकारूपेण लिखितः भामहस्य काव्यशास्त्रस्यादिग्रन्थः "**काव्यालंकारः**"इति नामकेन प्रसिद्धः ।रुद्रटस्य काव्यविषयकं शास्त्रं "**काव्यालंकारसारसंग्रहः**"इत्यनेन नामकेनाभिधीयते ।वामनस्यापि सूत्रकारेण लिखितस्य ग्रन्थस्य नाम "काव्यालंकारसूत्रम्" इति ।अतः प्राचीनकाले काव्यशास्त्रार्थे "**काव्यालंकारः**" इति नाम अधिकं प्रचलितमिति दृश्यते ।अत्र "**अलंकारः**" इति शब्देन " **सौन्दर्यम्** ' इत्यस्यार्थस्य बोधो भवति ।अलंकारेति शब्दः सौन्दर्यविधायकः इति वामनेनापि लिखितः –"**सौन्दर्यमलंकारः** " (**काव्यालंकारसूत्रम् -१/२**) इत्येवम् । इतरेणाचार्येणापि सौन्दर्यावधायकः धर्मः एव " **अलंकारः**" इति प्रयुक्तो भवति –"**काव्यशोभाकरान् धर्मान् अलंकारान् प्रचक्षते** " (**काव्यादर्शः -२/१**) इत्येवम् ।एवम्प्रकारेण "**काव्यालंकारः**"इति शब्दस्यार्थः काव्यसौन्दर्यमिति भवति लक्षणया च काव्यसौन्दर्यविधायकं शास्त्रमिति गृह्यते । एतदर्थं काव्यसौन्दर्यस्य परीक्षायाः आधारभूतस्य मौलिकसिद्धान्तस्य प्रतिपादनकारी प्राचीनग्रन्थसमूहः एव "**काव्यालंकारः**" इति नामकेनाख्यायते ।एतेषु ग्रन्थेषु न केवलं अलंकाराणां वर्णनमस्ति ,अपितु सौन्दर्यपरीक्षार्थं गुण-रीति-दोष-अलंकारादीनाम् आवश्यिकानां तत्त्वानां प्रतिपादनं भवति । अतः अत्र प्रयुक्तस्य "**अलंकारः**" इति शब्दस्य अर्थः "**सौन्दर्यविधायकः**" इति स्वीकृत्य काव्यसौन्दर्यप्रतिपादकं शास्त्रं "**काव्यालंकारः**" इति युक्तिसङ्गतमस्ति ।

अलंकारशास्त्रम्

काव्यशास्त्रं बोधयितुं कुत्रापि "अलंकारशास्त्रम्" इति प्रयुक्तो भवति ।प्रातापरूद्रीयटीकायां "**अलंकारशास्त्रम्**"इति नाम प्रतिपादनार्थं "**छत्रिन्यायः**'(**काव्यादर्शः -२/१**) इति अवलम्बनं कृतम् ।तेन लिखितम् –"**यद्यपि रसालंकारद्यनेकविषयमिदं शास्त्रं तथापि छत्रिन्यायेन अलंकारशास्त्रमुच्यते**"इति (**प्रतापरूद्रीयटीका**) ।अस्यार्थोऽयम् ,यद्यपि अस्मिन् शास्त्रे रस-गुण-दोष-अलंकारेत्यादीनां विषयानां वर्णनं भवति तथापि छत्रिन्यायेन ईदृशो ग्रन्थः केवलं "**अलंकारशास्त्रम्**"इति नामकेन अभिहितो भवितुमर्हति । परन्तु कः छत्रिन्यायः ?अस्याभिप्रायोऽयम् ,कस्मिंश्चित् जनसमागमे अनेकेषु लोकेषु कतिपयानां मस्तके छत्राणि सन्ति ,परन्तु तत्र प्रायः एव छत्रविहीनाः ।एतत् दृष्ट्वाऽपि व्यवह्रियते "**छत्रिणो यान्ति** "इति ।अर्थात् कतिपयानां जनानां मस्तके छत्रे सत्यपि यथा " **छत्रिणः यान्ति** " इति प्रयुज्यते तथैव अलंकारशास्त्रेषु अलंकारतिरिक्ते विषयसमूहे स्थितेऽपि अलंकारस्य प्रधानत्वं

स्वीकार्य "**अलंकारशास्त्रम्** 'इति प्रयुज्यते ।न तु अस्यां टीकायामपि तु इतरेभ्यः पण्डितेभ्यः अपि ईदृशं मतम् ।

कैश्चित् इयं व्याख्या न स्वीकृता ।काव्ये अलंकारस्य प्राधान्यं नास्ति अपि तु रसस्य प्राधान्यमस्ति ,यतः रसः एव काव्यस्यात्मा न तु अलंकारः इति ते मन्यन्ते ।तेषामभिप्रायः यत् ,काव्येषु अलंकाराणां स्थिति केवलं कटक-कुण्डलादिवत् गौणः ।यथा कटक-कुण्डलादयः मनुष्याणां उत्कर्षवर्धकधर्मः भवितुमर्हति ,न तु जीवनधारकधर्मः तथैव काव्येषु अलंकाराः अपि न काव्यानां जीवनम् ।यथा शरीराणां जीवनधारकः आत्मा तथैव काव्यानां जीवनधारकः तत्त्वं रसः । अतः रसादयेषु प्रधानतत्त्वेषु विद्यमानेषु अपि तेषां गौणीकृत्य वास्तविकस्य गौणस्य प्राधान्यं प्रदाय "अलंकारशास्त्रम्' इति नामकरणं न युक्तिसङ्गतम् इति विरुद्धवादिनां मतम् । ते मन्यन्ते यत् ,वामनेन –"**सौन्दर्यमलंकारः** " इति स्मृत्वा अलंकारशास्त्रस्य "**सौन्दर्यशास्त्रम्** " इति नामकरणं अधिकसङ्गतम् ।

काव्यशब्देन सह शास्त्रशब्दस्य प्रयोगः

उपर्युक्तेन विवरणेन एतत् परिस्कृतं यत् ,ईदृशशास्त्रस्य नाम "**काव्यालंकारः** "इति आसीत् , अनेन सह शास्त्रेति शब्दस्य प्रयोगो नासीत् ।उत्तरकाले तस्य शास्त्रस्य महत्त्वं वर्धनार्थं तेन सह शास्त्रेति शब्दः संयुक्तो भवति ।सामान्यरूपेण "**शासनात् शास्त्रम्**' इति व्युत्पत्त्या शासनकरणात् शास्त्रमिति कथ्यते ।शासनस्यार्थं मनुष्यान् कार्ये प्रवृत्तकरणम् अथवा कार्यात् निवृत्तिकरणम् ।वेदादयेभ्यः शास्त्रेभ्यः मनुष्याः सत्कार्ये यथा प्रवृत्ताः भवन्ति तथैव असत्कार्यात् निवृत्ताः भवन्ति । एतदर्थं इमाः ग्रन्थाः शास्त्रमिति कथ्यते ।अतः मुख्यरूपेण प्रवृत्ति-निवृत्तिविधायकः ग्रन्थः एव शात्रमिति कथ्यते ।एतदर्थं शास्त्रस्य लक्षणं उक्तम् –

" **प्रवृत्तिर्वा निवृत्तिर्वा नित्येन कृतकेन वा ।**

पुंसां येनोपदेशित्वं तच्छास्त्रमिति कथ्यते "॥ इति ।

अत्र नित्येति पदेन वेदः कृतकेति पदेन च स्मृतिग्रन्थः विवक्षितः ।एतेभ्यः शास्त्रेभ्यः मनुष्याः हेयोपादेयः उपदिष्टः भवति ।एतदर्थं एतानि शास्त्राणि मनुष्येभ्यः सेव्यानि । यद्यपि प्रवृत्ति-निवृत्तिः काव्यस्य न मुख्यप्रयोजनं ,रसास्वादनमेव मुख्यप्रयोजनं **"सद्यः परनिवृतिः**" इत्यस्मात् ,तथापि "**कान्तासम्मिततयोपदेशयुजे**" इत्यस्मात् ज्ञायते यत्, कर्तव्याकर्तव्यानामुपदेशप्रदानमपि काव्यस्य गौणप्रयोजनम् । एतदर्थं साहित्यदर्पणे विश्वनाथेन उक्तम्-

""**चतुर्वर्गफलप्राप्तिः सुखादल्पधियामपि ।**

काव्यादेव यतस्तेन तत्स्वरूपं निरूप्यते "॥ इति ।(साहित्यदर्पणः-१/२)

काव्ये चतुर्वर्गप्राप्तिमुपपादयितुं वृत्त्यामुक्तम् –"**चतुर्वर्गफलप्राप्तिहि काव्यतो रामादिवत्प्रवर्तितव्यं न रावणादिवदित्यादिकृत्याकृत्यप्रवृत्तिनिवृत्त्युपदेशद्वारेण सुप्रतीतैव** "इति । अर्थात् काव्यात् चतुर्वर्गप्राप्तिः रामादिवत् पित्राज्ञापालनादिधर्मकार्ये प्रवृत्तिः भवेत् ,रावणादिवत् परदारापहररूपाधर्मकार्ये प्रवृत्तिर्न भवेत् ।अनया रीत्या कृत्यकार्येषु अर्थात् शास्त्रविहितेषु अनुष्ठेयकार्येषु प्रवृत्तेः ,अकृत्यकार्येषु च अर्थात् अशास्त्रीयेषु अनाचरणीयेषु कार्येषु निवृत्तेरुपदेशः प्रदत्तः ।अर्थात् रामायणादिकाव्यपाठान्तरमिदं ज्ञातं भवति यत्, धर्ममार्गे विचरणे सति अभ्युदयः अधर्ममार्गे च विनाशः अवश्यमभावी । अतः धर्मकार्येषु प्रवृत्तिहेतुः

धर्मात् अर्थः, अर्थाच्च सुखप्राप्तिर्भवति ।एवम्प्रकारेण धर्मफलेच्छात्यागे सति मोक्षप्राप्तिर्भविष्यति ।एतदर्थमुक्तं विश्वनाथेन दर्पणे –

"धर्मार्थकाममोक्षेषु वैचक्षण्यं कलासु च ।
करोति कीर्तिं प्रीतिञ्च साधुकाव्यनिषेवनम् "॥इति ।(साहित्यदर्पणः -१/३)

अतः उपर्युक्तया व्युत्पत्त्या एव काव्येषु शास्त्रत्वं सिद्धं भवति ।वेदान्तदर्शने शास्त्रशब्दस्य एक व्युत्पत्तिः दृश्यते –"**शासनात् शास्त्रम्** "इति ।अर्थात् केवलं शासनकारकः विधि-प्रतिषेधकः ग्रन्थः एव शास्त्रेति आख्यायते ।अपि च किमपि गूढतत्त्वप्रतिपादनकारकः ग्रन्थोऽपि शास्त्रशब्देन व्यवह्रियते ।यतःअस्याः व्युत्पत्त्याः कारणं वेदान्तस्य प्रतिपाद्यविषयः –"**ब्रह्मप्रवृत्ति-निवृत्तिः**" । यो ब्रह्मः विधेः निषेधस्य वा विषयः न तस्य प्रतिपादनं कथं शास्त्रेषु सम्भवति ?अस्याः शङ्कायाः निवारणकल्पे "**शासनात् शास्त्रम्** "इति व्युत्पत्तिः कृतं भाष्यकारेण ।अनेन ब्रह्मरूपं गूढतत्त्वं प्रतिपादनकारी वेदान्तादयमुद्दिश्य शास्त्रमिति शब्दप्रयोगः यथा युक्तिसङ्गतः तथैव तु विधि-प्रतिषेधरहितस्य ब्रह्मणः शास्त्रप्रतिपाद्यत्वमपि समर्थितमस्ति ।एतदर्थं शासनात्मकरहितेऽपि अर्थात् विधि-प्रतिषेधरहितेऽपि कस्यापि गूढतत्त्वस्य प्रतिपादनकारिग्रन्थः "**शास्त्रम्**" इत्युच्यते ।अनेन हि कारणेन "**अलंकारशास्त्रम्**","**काव्यशास्त्रम्**" इत्यादयः शब्दाः प्रयुक्ताः भवन्ति ।काव्येन सह शास्त्रशब्दस्य संयोगात् तेषां काव्यानां माहत्त्वमपि वर्धितो भवति ।

काव्यशास्त्रमिति शब्दस्य प्रयोगाधारः

एकादशशताब्द्यां "सरस्वतीकण्ठाभरणम्"इति ग्रन्थे भोजदेवेन मुख्यरूपेण शास्त्रार्थं "**काव्याशास्त्रम्**" इति शब्दः प्रयुक्तः ,यत्र "**शासनात् शास्त्रम्**" इति व्युत्पत्तिरेव तेन समर्थितः इत्येवम् –

" यद्विधौ च निषेधे च व्युपत्तिरेव कारणम् ।
तदध्येयं विदुस्तेन लोकयात्रा प्रवर्तते "॥इति ।(सरस्वतीकण्ठाभरणम् -२/१३८)

तात्पर्यमिदं यत् , विधि-निषेधस्य ज्ञानकारकः अर्थात् शासनकारी ग्रन्थः एव "**शास्त्रम्**" इति कथ्यते तस्य च शास्त्रस्य अध्ययनं कर्तव्यं लोकव्यवहारसञ्चालनात् ।अन्योः विधि-प्रतिषेधयोः ज्ञानार्थं मुख्यसाधनत्रयमस्ति -१) **काव्यम्** २) **शास्त्रम्** ३) **इतिहासः** च । अनेन त्रयेन कारणेन शास्त्रत्रयं उत्पद्यते ।१) काव्येन शास्त्रेण च मेलनात् "**काव्यशास्त्रम्** "इति उत्पद्यते २) काव्येन इतिहासेन च मेलनात् "**काव्येतिहासः**" इति उत्पद्यते ३)शास्त्रेण इतिहासेन च मेलनात् "**शास्त्रेतिहासः**" इति उत्पद्यते । एवम्प्रकारेण विधि-प्रतिषेधयोः व्युत्पत्तिः अर्थात् ज्ञानस्य षट्कारणं भवति इति भोजदेवेन मन्यते ,तद्यथा -१) **काव्यम्** २) **शास्त्रम्** ३) **इतिहासः** ४) **काव्यशास्त्रम्** ५) **काव्येतिहासः** ६) **शास्त्रेतिहासश्चेति** । एषां प्रतिपादनार्थं तेनोक्तम् -

" काव्यं शास्त्रेतिहासौ च काव्यशास्त्रं तथैव च ।
काव्येतिहासः शास्त्रेतिहासस्तदपि षड्विधम् "॥ इति ।(सरस्वतीकण्ठाभरणम् -२/१३९)

एवम्प्रकारेण भोजदेवेन विधि-प्रतिषेधयोः ज्ञानार्थं काव्यं, काव्यशास्त्रं, काव्येतिहासश्चेति शब्दत्रयं प्रयुक्तम् अपि च तेन काव्यस्य प्रयोजनेषु केवलं "कान्तासम्मिततयोपदेशयुजे" इति मुख्यप्रयोजनं स्वीकृतम् ।

साहित्यशास्त्रम्

काव्यशास्त्रार्थ प्रागेव "**काव्यालंकारः**" इति शब्दः प्रयुक्तः आसीत् । तत्र अलंकारशब्दः सौन्दर्यविधायकः आसीत् ।अर्थात् काव्यानां सौन्दर्यप्रतिपादनकारी शास्त्रमेव "**काव्यालंकारः**" इति आसीत् ।परन्तु अनेन शब्देन सह तत्र "**साहित्यशास्त्रम्**" इति एकः अन्यः शब्दः अपि प्रयुक्तः आसीत् ।नवीने युगे काव्यशास्त्रस्य इतरानामापेक्षया "साहित्यशास्त्रम्' इति नाम अधिकं प्रचलितो भवति ,यथा विश्वनाथेन "**साहित्यदर्पणः**" इति । ग्रन्थोऽयं अधुना अधिकः प्रचलितः ।एतदर्थं काव्यसौन्दर्याय साहित्यशब्दः अधिकः प्रचलितो भवति परन्तु "**काव्यशास्त्रम्**" तथा "**काव्यालंकारः**" इत्यनयोः शब्दयोः प्रचलने न्यूनं प्रचलनं दृश्यते । विश्वनाथस्य पूर्ववर्तिना अलंकारसर्वस्यकारेण रुय्यकेन अपि तस्य "**साहित्यमीमांसा**" इति द्वितीये ग्रन्थे साहित्येति शब्दस्य प्रयोगः कृतः ।परन्तु ग्रन्थोऽयं न अधिकः प्रचलितोऽभवत् ।एतदर्थं काव्यशास्त्रमित्यर्थे साहित्येति शब्दस्य प्रयोगः कर्तृरूपेण विश्वनाथस्य नाम एव स्वीकृतमस्ति ।

परन्तु विश्वनाथः अस्य शब्दस्य न आदिप्रयोगकर्ता ।भामहेन विरचिते काव्यालंकारे एव अस्य प्रथमो प्रयोगो दृश्यते ।भामहेन स्वकीयग्रन्थस्य प्रारम्भे काव्यलक्षणं कृतम् –"**शब्दार्थौ सहितौ काव्यम्**" इति । अर्थात् शब्दस्य अर्थस्य च साहित्यमेव काव्यम् ।शब्दार्थयोः साहित्यमेव काव्यमित्यभिप्रायं स्पष्टीकरणार्थ वक्रोक्तिजीवितकारेण आचार्येण कुन्तकेनोक्तम् –

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" **साहित्यमनयोः शोभाशालितां प्रति काप्यसौ ।**

अन्यूनानतिरिक्तत्वमनोहारिण्यवस्थितिः "॥इति । (वक्रोक्तिजीवितम् -१/१३)
</div>

एतदतिरिक्तं सौन्दर्याधानार्थ शब्दार्थयोः मनोहारिणिस्थितिरेव "साहित्यम्' इति ।अर्थात् काव्येषु सुन्दरार्थयुक्तस्य शब्दस्य तथा तद्रूपस्य सुन्दरस्य शब्दस्य प्रयोगं कर्तव्यम् ।अथवा सुन्दरशाब्दानुसारी सुन्दरार्थस्यापि समन्वयं कर्तव्यम् । अत्र शब्दस्य अर्थस्य च प्रयोगे न्यूनाधिक्यं न काम्यम् ।एतदर्थमुक्तं कुन्तकेन उक्तश्लोके –"**अन्यूनानतिरिक्तत्वमनोहारिण्यवस्थितिः**" इति ।अस्य नाम शाब्दार्थयोः साहित्यम् ।ईदृशेन साहित्येन सह युक्तः शब्दार्थयोः नाम एव काव्यम् ।अयमेव भामहस्य "शब्दार्थौ सहितौ काव्यम्" इत्यस्याभिप्रायः ।कुन्तकेनापि शब्दार्थयोः ईदृशं साहित्यं स्वीकृतं काव्यलक्षणे इत्येवम् –

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" **शब्दार्थौ सहितौ वक्रकविव्यापारशालिनि ।**

वन्दे व्यवस्थितौ काव्यं तद्विदाह्लादकारिणि "॥ इति । (वक्रोक्तिजीवितम् -१/७)
</div>

आचार्यभोजदेवेनापि शृङ्गारप्रकाशे "**शब्दार्थयोः साहित्यं काव्यम्**" इत्यनेन साहित्यशब्दः उल्लिखितः ।एवम्प्रकारेण भामह-कुन्तक-भोजदेवादयः शब्दार्थयोः साहित्यमाधारीकृत्य स्वकीयं काव्यलक्षणं कृताः इत्याधारीकृत्य च काव्यशास्त्रार्थ "**साहित्यम्**"इति शब्दः प्रयुक्तो भवति ।अयं प्रयोगः आदिकालादेव प्रचलितो भवति एतदाधारीकृत्य च काव्यमीमाघ्साकारेण राजशेखरेण "**पञ्चमी साहित्यविद्या इति यायावरीयः**" (काव्यमीमांसा) इति विलिख्य ईदृशशास्त्रार्थ "**साहित्यविद्या साहित्यशास्त्रम्वा** ' इति नाम प्रयुक्तम् ।अपि च एतदाधारीकृत्य एकादशशताव्यां रुय्यकेन स्वीयग्रन्थस्य नाम "**साहित्यमीमांसा**" इति चतुर्दशशताव्यां च विश्वनाथेन स्वीयग्रन्थस्य नाम "**साहित्यदर्पणः**" इति प्रयुक्तम् ।

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काव्यशास्त्रस्य नामान्तरं क्रियाकल्पः
</div>

काव्यसौन्दर्यविचाराकारी शास्त्रार्थ काव्यालंकारः ,काव्यशास्त्रम् ,अलंकारशास्त्रम् ,साहित्यशास्त्रम् ,साहित्यविद्या चेत्यादयानि नामानि प्रचलितानि सन्ति परन्तु एतदतिरिक्तं एतादृशशास्त्रार्थ "**क्रियाकल्पः**"

इति नामान्तरमपि दृश्यते ।इदं तु प्राचीनतमम् नाम । अस्य निर्देशः वात्स्यायनेन विरचितस्य **कामशास्त्रस्य** चतुःषष्टिकलायां दृश्यते ।क्रियाकल्पः काव्यक्रियाकल्पस्य संक्षिप्तरूपमस्ति ।अस्य पूर्ण नाम **"काव्यक्रियाकल्पः "** अर्थात् काव्यशास्त्रम् ।न केवलं कामशास्त्रे , **"ललितविस्तरः"** इति नामके बौद्धग्रन्थेऽपि अस्य शब्दस्य प्रयोगो दृश्यते ।कामशास्त्रस्य टीकाकारेण अस्यार्थः **"क्रियाकल्प इति काव्यकरणविधिः काव्यालंकार इत्यर्थः "** इति क्रियते ।अनेन एतत् स्पष्टं यत् ,चतुःषष्टिकलान्तर्गतः अयं शब्दः काव्यालंकारः अथवा अलंकारशास्त्रम् इत्यर्थे प्रयुक्तो भवति ।वाल्मीकिरामायणस्योत्तरकाण्डे लवकुशयोः ज्ञानश्रवणार्थं रामेनाहूतायां सभायां वैयाकरण-नैगम-स्वरज्ञ-गान्धर्वानाञ्चोपस्थितिः वर्णिता एभिः सह **" क्रियाकल्पः तथा काव्यवित् "** इत्यस्यापि वर्णनामस्ति ।तत्र काव्यविदित्यस्यार्थः केवलं काव्यरसग्रहणे समर्थः जनः परन्तु क्रियाकल्पविदित्यस्यार्थः काव्यसौन्दर्यपरीक्षायां समर्थः जनः ।रामायणस्योक्तः श्लोकांशः इत्येवम् –

" क्रियाकल्पविदश्चैव तथा काव्यविदो जनान् " इति । (उत्तरकाण्डम् -९४/४)

एवम्प्रकारेण काव्यशास्त्रार्थे -१) **काव्यालंकारः** २) **काव्यशास्त्रम्** ३) **अलंकारशास्त्रम्** ४) **साहित्यशास्त्रम्** ५) **क्रियाकल्पः** चेति नामपञ्चकः प्रयुक्तो भवति ।एतेषु भामह-रुद्रट-वामन् –उद्भटादयेभ्यः **"काव्यालंकारः "** इति समर्थितः ।यद्यपि कुन्तकस्य ग्रन्थस्य नाम **"वक्रोक्तिजीवितम् "** तथापि अस्य ग्रन्थस्य भागद्वयमस्ति –वृत्ति कारिका च ।भागद्वयस्य रचयिता कुन्तकः एव । अस्य वृत्तिभागस्य नाम **"वक्रोक्तिजीवितम् "**इति परन्तु अस्य ग्रन्थस्य मौलकारिकाभागस्य नाम –**"काव्यालंकारः "** इति एतद्वर्णितं स्वयं कुन्तकेन तस्य ग्रन्थस्य प्रारम्भे इत्येवम् –

" लोकोत्तरचमत्कारकारिवैचित्र्यसिद्धये ।

काव्यस्यायमलंकारः कोऽप्यपूर्वो विधीयते " ॥इति ।(वक्रोक्तिजीवितम् -१/२)

अनेन प्रतीयते यत् ,कुन्तकस्य ग्रन्थस्यापि नाम **"काव्यालंकारः "**आसीत् ।एवम्प्रकारेण प्रायः आलंकारिकाः स्व-स्वग्रन्थस्य नाम **" काव्यालंकारः'**प्रयुक्ताः परन्तु एतत्तु नोचितं यत् सर्वेषां ग्रन्थस्य नाम सममेव इति विचिन्त्य ससमशताव्यां दण्डी प्रथममेव तस्य ग्रन्थस्य नाम **" काव्यादर्शः "** दीयते ,तदनन्तरं नवमशताव्यां राजशेखरेण **"काव्यमीमांसा"** ,एकादशशताव्यां मम्मटेन **"काव्यप्रकाशः "** ,चतुर्दशशशताव्याञ्च विश्वनाथेन **"साहित्यदर्पणः "** इति प्रयुक्तः ।

सहायकग्रन्थाः
अलंकारशास्त्रस्येतिहासः –डा. जगदीशचन्द्रमिश्रः –चौखम्वा सुरभारती प्रकाशनम्
काव्यप्रकाशः –आचार्य वामनः –मोतिलाल् बनारसीदासः
काव्यमीमांसा –पण्डित केदारनाथ शर्मा सारस्वतः – विहार-राष्ट्रभाषा -परिषद्
काव्यादर्शः –आचार्यः श्रीरामचन्द्रमिश्रः –चौखम्बा विद्याभवनम्
काव्यालंकारः –देवेन्द्रनाथः शर्मा - विहार-राष्ट्रभाषा -परिषद्
काव्यालंकारसूत्राणि –पं .श्री हरगोविन्दशास्त्री - चौखम्वा सुरभारती प्रकाशनम्
वक्रोक्तिजीवितम् –श्रीराधेश्यामिमिश्रः –चौखम्बा संस्कृतसंस्थानम्
सरस्वतीकन्ठाभरणम् –डा. कामेश्वरनाथमिश्रः –चौखम्वा ओरियेन्टालिया
साहित्यदर्पणः –प. शालिग्रामशास्त्री - मोतिलाल् बनारसीदासः

ALGORITHMIC IMPLEMENTATION OF DIABETIC RETINOPATHY DETECTION & CLASSIFICATION

Pooja Patil[1], Aishwarya Mali[1], Aditya Manolkar[1], Nupura Kulkarni[1], S.P. Metkar[1]
[1]Department of Electronics and Telecommunication, College of Engineering Pune, India

Abstract

Diabetes is a chronic condition that is developed as a result of impaired glucose metabolism and which causes long-term damage and results in failure of multiple organs. It's most usual complication is diabetic retinopathy, which has long been one of the prime causes of blindness and visual impairments in adults.The current manual screening methods requiring skilled diagnostic professionals are impotent on a huge patient's fundus image database. Hence an automated Diabetic Retinopathy Detection and Classification system having the ability to replace manual methods and substantially reduce the manual work involved in the process of screening is required. In the conventional approach, after data pre-processing, Discrete Wavelet Transform, Gabor Kernel, and K-means clustering; KNN and SVM classifiers were used. KNN and SVM were chosen since they perform outstandingly well on smaller datasets. The major focus was on studying and selecting the features (both local and global). This work explores the modernistic approach of using Convolutional Neural Networks for categorizing the fundus images into 5 categories. Initially, a small CNN was used on multiple datasets (Kaggle and IDRiD). Later a deeper CNN was implemented which gave subtle results. Studying the effects of different layers on the accuracy and accordingly altering the layers was the focus of attention in this approach. SGD optimizer was used for enhancing the accuracy even more.

Keywords: Convolutional Neural Network, Diabetic Retinopathy, Feature based approach, Deep Neural Network

1. Introduction

India is about to emerge as the world's diabetic capital. Nearly two-thirds of all type 2 and nearly all type 1 diabetes patients are expected to develop diabetic retinopathy (DR) over time(Gadkari SS, 2016). Diabetic retinopathy is an ailment that involves gradual injury to the retina which happens when blood and other fluids begin to leak from the tiny blood vessels inflicting swelling within the retinal tissue. There are no visual symptoms in the initial stages and thus it's suggested that everybody with diabetes ought to have one comprehensive dilated eye examination once a year. Detecting and treating the ailment earlier could limit the potential for important loss of vision because of diabetic retinopathy. Generally, DR is often separated into 2 major stages: non-proliferative DR (NPDR) and proliferative DR (PDR). NPDR is further divided into 3 sub-stages: mild, moderate, and severe NPDR. Together, these 5 stages form up the

widely used 'International Clinical Diabetic Retinopathy Disease Severity Scale' (American Academy of Ophthalmology, 2002).

Stages of Diabetic Retinopathy (DR):

1. **No DR:** The eye isn't suffering from the illness and is healthy.
2. **Mild DR:** There'll be balloon-like swelling in little areas of the blood vessels within the retina.
3. **Moderate DR:** A number of the blood vessels within the retina can get blocked.
4. **Severe DR:** Additional blood vessels get blocked resulting in lack of adequate blood flow in retinal areas.
5. **Proliferative DR:** New blood vessels within the retina can begin to grow but they are fragile and abnormal due to which they may leak blood and further lack of vision.

Clinically the diagnosis of DR is done with fundus images, which may be acquired by photographing the fundus directly. The population of diabetic patients is huge whereas knowledgeable ophthalmologists are rare and are distributed unevenly. For middle and low-income countries, the gap between the population of diabetic patients and ophthalmologists can be very wide, indicating an urgent need for systems that diagnose DR automatically. The present manual screening strategies requiring trained diagnostic professionals are sluggish and impotent on patient's large fundus image databases. An automated Diabetic Retinopathy Detection system thus has the potential to replace the manual procedure. Hence, we propose a system that utilizes a deep learning and image processing approach to sense numerous abnormalities related to retinopathy.

2. Literature Review

We studied the traditional approach which incorporates feature extraction followed by a varied group of classifiers for categorization of stages and also a newer approach involving CNN and Deep CNN.

2.1 Feature based approach

S. Roychowdhury et al. (Roychowdhury, S., Koozekanani, D.D. and Parhi, K.K, 2013), proposed a computer-aided screening program (DREAM) that analyses background images with differing lighting and fields of view and produces a diabetic retinopathy intensity score (DR) using machine learning. Classifiers like Gaussian Mixture Model (GMM), k-nearest neighbor (kNN), Support Vector Machine (SVM), and AdaBoost are evaluated to classify non-lesion retinopathy lesions. S. Kar et al. (Kar, S.S. and Maity, S.P., 2017)used image recognition algorithms to identify stages of diabetic retinopathy. Automated analysis of DR using image processing techniques are introduced by Adarsh et al (P. Adarsh and D. Jeyakumari, 2013). In this approach, extraction of retinal blood vessels, exudate, micro-aneurysms, hemorrhages, and texture features takes place, followed by the construction of Multiclass SVM using the area of lesions and texture features. spectacular results are reported using the publically obtainable datasets DIARETDB0 and DIARETDB1 with an accuracy of 0.96 and 0.946 respectively.

2.2 CNN Approach

We initially studied different CNN architectures and then created our own CNN structure since it's usually tough to search out a structure that works optimally for a given task. Xiaoliang Wang et al. (Xiaoliang Wang, Yongjin Lu, Yujuan Wang, Wei-Bang , 2018), Diabetic Retinopathy Stage Classification using Convolutional Neural

Networks, 2018), employed a group of deep CNN methods to classify the DR stage. InceptionNet V3 achieved state-of-the-art precision results. The experiment was carried out on the premise of a total of 166 fundoscopic images and they found that InceptionNet V3, that is devised with the most advanced CNN building techniques gave the best 5-fold cross-validation average classification accuracy of 63.23%, compared to ancient AlexNet and VGG16, using solely this small number of images. Rahul Ghosh et al. (Rahul Ghosh, Kuntal Ghosh, Sanjit Maitra, 2017), developed the models leveraging Theano, an open-source numerical computation library for Python. This network was trained using a high-end GPU over Kaggle data set of over 30,000 images and the proposed model achieved around 95% accuracy for the two-class classification and around 85% accuracy for the five-class classification on around 3,000 validation images.

2.3 DNN Approach

In the newer approach, Zhentao Gao et al. (Zhentao Gao, Jie Li, Jixiang Guo, Yuanyuan Chen, Z, 2018) has developed a dataset of DR fundus pictures marked with the right treatment method needed and this was used for training. Accuracy of 88.72% was obtained with a four-degree grouping process within the tests. During the clinical study, the model reached a success rate of 91.8% with ophthalmologists, indicating the feasibility of the research. We referred this paper primarily for the image pre-processing and also the feature extraction part in our model.

3. Methodology

3.1 Feature based approach

This approach can generally be broken down into 3 stages: Pre-processing, Feature extraction and classification. Pre-processing includes gray-scale conversion and adaptive histogram equalization. Feature extraction stage includes Discrete Wavelet Transform, Gabor Kernel, and k-means clustering. SVM and KNN are used for the final classification stage. The details for each stage are elaborated in subsequent sections. Figure 3.1 shows a block diagram for the same.

Figure 3.: Block Diagram for feature-based approach

3.1.1 Pre – processing Stage

All images are pre-processed to eliminate false photographic artefacts and illumination inconsistencies. The steps include a RGB to Gray conversion followed by histogram equalization. Histogram Equalization is used to enhance contrast of images.

3.1.2 Feature Extraction

In the processing stage DWT is used for feature extraction. The function employed for DWT works in two steps. The first step returns approximation followed by horizontal detail which is then followed by vertical detail and finally diagonal detail coefficients. These coefficients are then used for reconstruction of data which gives the final output.

The purpose of the Gabor Kernel in our work is to extract Optic Nerves and Retinal pores more precisely. Blood vessel area decreases due to contraction that occurs in

diabetic retinopathy. Hence optic nerve area acts as a feature in determining the presence of DR. We have implemented the MF-FDOG technique to extract the above two features. In our work, we employed a k-means clustering algorithm for color quantization to reduce the memory requirement.

3.1.3 Classification

This stage consists of training and testing of classifiers that predicts the DR stage that the image belongs to. We have performed tests on two multi-class classifiers viz. SVM and KNN.

3.2 Deep Learning Approach

Deep learning is a multi-layered neural network that is able to learn higher-level parameters from a lower-level represented data directly. This capability reduces the need to extract any ad-hoc features but to train the model a diverse and deep dataset is necessary.

3.2.1 Pre-processing

The steps include image normalization and data augmentation. Size Normalization was done to have uniformity in the fundus diameter. The images were summed horizontally and vertically and regions below selected threshold were discarded as also images were resized to fixed dimensions. Illumination conditions and color temperatures while capturing fundus images may vary hence color normalization was done by tuning the images and shifting each of the RGB channels of the fundus image to a pre-calculated mean and truncating the values above 255.

$$R_i = min\ \{\frac{R_i}{mean(R)}.r^*, 255\}$$

$$G_i = min\ \{\frac{G_i}{mean(G)}.g^*, 255\}$$

$$B_i = min\ \{\frac{B_i}{mean(B)}.b^*, 255\}$$

where *R, G, B* represent the RGB channels of the image being processed, R_i, $G_i B_i$ represent each pixel value in the corresponding channel, and r^*, g^*, b^* are mean values of the RGB channels calculated from images that have been captured well with illumination.

To train the network successfully and to compensate for lack of data we augmented our data through the following means: horizontal and vertical shift of 10%, rotation range of 90, horizontal and vertical flip were randomly applied.

3.2.2 Feature Extraction using Convolution Neural Network

For most of the image classification problems, the widely and popularly used neural network model is Convolutional Neural Network (CNN) and we have compiled it as given below.

Model Compilation

We start by applying the input layer consisting of the data generated by the Augmentor, to a convolutional layer which gives an output of real high value where it detects the presence of desirable features, or a small value otherwise. Kernel size of (3,3) and (2,2)

are used. Strides and padding too were used. The number of neurons has been increased in multiplicative order and then reduced in a similar manner. The outputs of the convolution network are applied to Batch Normalization layers. Separate Zero padding layers are also used. Max Pooling layers with the ReLU activation function are used for minimizing the redundancy. The flattening layer is used to convert the dimensionality of features. Before presenting the feature vector to the output layer, it is passed through multiple hidden or dense layers. The activation function at the output, finalized after multiple trials was, Softmax function.

Deep Convolutional Neural Network

A deep neural network is nothing but a CNN with more layers. Hyperparameter tuning is done in DNN to get the best results. We have used the following parameters that were found to work the best in our work: binary cross-entropy loss function, SGD with momentum optimizer, learning rate of 0.01, decay of 10^{-6}, momentum of 0.9, minimum epoch was 6 and maximum 18, 256x256 image size with 25,179,701 training parameters of which 25,178,965 were trainable.

3.2.3 Classification

Classification by neural networks is done by training the created model on a dataset then testing it on another part of the dataset which wasn't included during the training. While training, the model learns certain parameters called trainable parameters that keep changing and can be set to the best values by Optimizer Algorithms. The parameters that can't be learned during training are called as hyperparameters which need to be determined by the model designer.

Hyperparameter Tuning

We have used adaptive learning rates using optimizers. Out of the two optimizers tested, SGD happened to give better accuracy compared to Adam. We strived for a small gap between the test error and the training error for an apt number of epochs. Various trials were taken with different numbers of epochs and the model history for each iteration was observed. For non-linearity in the model we used ReLU activation function after every convolution layer and Softmax was a better choice for the output layer as compared to the others. More layers provide us with a better model but with a trade-off of computational complexity. The number of layers were increased until there was no improvement in the test error or in our case validation error. Two hidden layers were added along with Dropout layers after a series of convolution, pooling, and batch normalization layers. Dropout for regularization:Dropout is normally used for regularization with a probability of 0.5 whose purpose is to drop certain units randomly (based on probability provided) to avoid overfitting. We have tried one layer with 0.3 while the other with 0.2.

4. Results and Discussion

This work was implemented on IDRiD dataset with 413 training and 103 testing images

4.1 Feature based method

The feature based method was implemented on the IDRiD dataset and the images were classified using SVM and KNN classifiers.

Feature extraction: Figure 4.1 shows feature extraction using Discrete Wavelet Transform (DWT), Gabor kernel (for denoising) and K-means clustering (for color quantization).
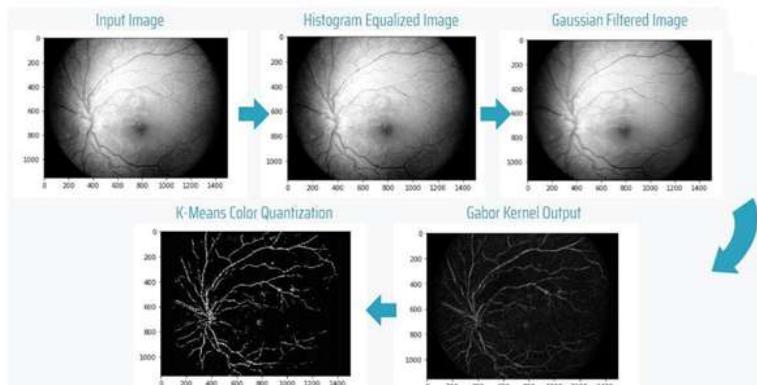
Figure 4.1: Feature extraction using Discrete Wavelet Transform (DWT), Gabor kernel and K-means clustering.

Classification results: The accuracy obtained using a SVM image classifier is 31.06% while that of KNN is 24.27% and the confusion matrices are shown in Figure 4.2(a) and Figure 4.2(b).

(a)   *(b)*
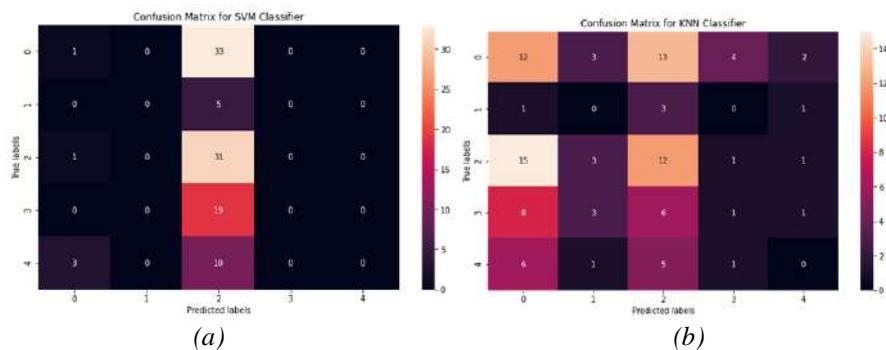
Figure 4.2:(a) Confusion matrix of SVM image classifier (b) Confusion matrix of KNN image classifier

4.2. CNN image classification

Pre-processing results: In Figure 4.3, 1st row has input fundus images of varying dimensions, 2nd row consists of resized images ($1024 \times 1024 \times 3$) and the 3rd row shows the normalized images.
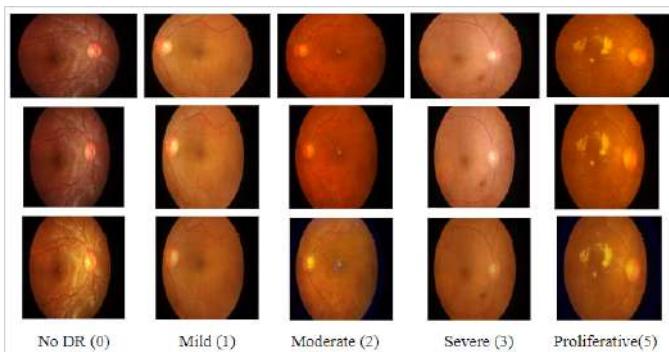
Figure 4.3: Pre-processing of images using an image normalization procedure

Short CNN image classification

For comparison between the conventional and the CNN approach, the IDRiD database(Porwal & Pachade, 2019) was tested on a short CNN model and it thus gave an improvement in accuracy. The training accuracy achieved was 38.27% with a loss of 1.462 and 5 epochs. The validation accuracy achieved was 45.23% with a loss of 1.441 while the input image size was 786×786×3. Testing accuracy obtained was 29.13%. The reason for getting such a low value is the limited size of the dataset which is a constraint due to the limited available resources.

Deep CNN image classification

Further layers were added to the short CNN image classification model and the input image size was reduced to 256×256×3 to get a deeper CNN image classification model. The training accuracy achieved was 79.782% with validation accuracy being 70.323% which can be observed in Figure 4.4(b) while the losses are seen in Figure 4.4(a).

(a)   *(b)*
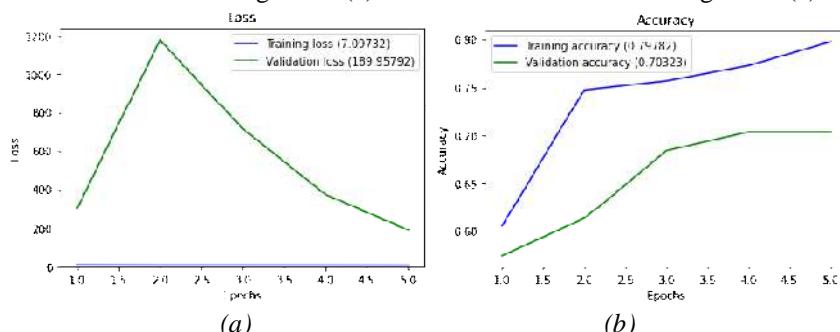
Figure 4.4: (a) Plot of Deep CNN model losses (b) Plot of Deep CNN model accuracies

Parameters of the CNN model were tweaked by changing output layers' activation function to softmax from sigmoid and hence accuracy improved slightly. The accuracy graph tends to flatten with the losses being significantly reduced. Figure 4.5(b) shows validation and training accuracy which are almost equal to 80% and losses are shown in Figure 4.5(a). The testing accuracy obtained is 18.45% and the reason is the limited size of the dataset which is a constraint due to the limited available resources.

(a)   *(b)*
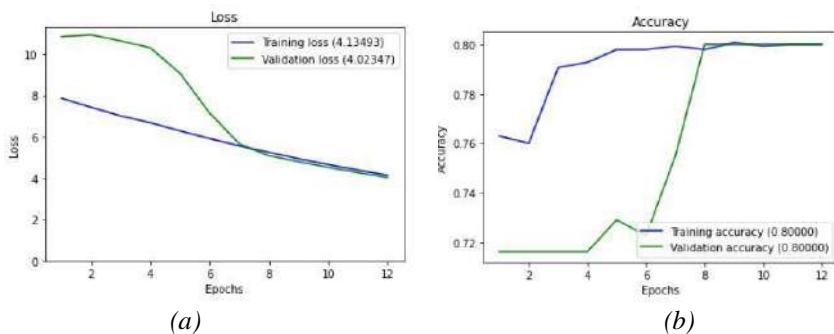
Figure 4.5: (a) Plot of Deep CNN model losses with tweaked parameters (b) Plot of Deep CNN model accuracies with tweaked parameters

4.3 Comparison table for image classification models

Table 4.1 shows comparative results for all of the approaches used. It is seen that the deep CNN model excels among all other classifiers on a smaller dataset.

Table 4.1: Comparison table for image classification model

Image classification model	SVM image classifier	KNN image classifier	Short CNN image classifier	Deep CNN image classifier
Training accuracy	31.60%	24.27%	38.27%	80.00%

4.4 Conclusion and Future work

The proposed work is implemented using Google Colaboratory (with 25.51GB RAM and 107.77GB disk space). It can be concluded that a deeper CNN model gives us an improvement in accuracy (validation and training accuracy of 80% with 12 epochs). It is comparable to a human expert diagnosis and also reliable. The testing accuracy was low due to the constraints in dataset availability (testing for CNN was performed on 103 images of IDRiD dataset). A good RAM size, GPU or CPU with impressive ROM caters to all of the resources needed for processing a huge dataset. Reinforcement learning or transferred learning could be a prospective candidate for future work. An ensemble of the conventional method and the CNN approach can be tested. Future work would also include implementing the proposed algorithm on hardware so as to accelerate the speed of Diabetic Retinopathy diagnosis and to take appropriate actions for its cure at the earliest.

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PHYSICO-CHEMICAL ANALYSIS OF AGRICULTURAL SOIL FROM DEFFERENT AREAS OF BAZPUR REGION IN UDHAM SINGH NAGAR-UTTARAKHAND

Prem Prakash Tripathi
Department of Chemistry
SBS Govt. PG College- Rudrapur, Udham Singh Nagar, Uttarakhand

Abstract

The fertility of soil depends on the concentration of nitrogen, phosphorous, potassium, organic and inorganic material, conductivity etc. The physico-chemical properties are required for the growth of plants. The tehsil Bazpur in Udham Singh Nagar,Uttarakhand is well known for agricultural farm land for both crops Rabi and Khariff. The study were carried out for four village sites 1,2,3 and 4 in different directions. The essential parameter pH, electrical conductivity (EC), organic carbon (OC), Sulpher (S), Zinc (Zn), Boron (B), Phosphors (P), Nitrogen (N) etc, were measured with nutrients and micronutrients of farmland. The obtain result are suggested for better fertility in the Bazpur region. Some village sites are rich nutrients and micro nutrients, some are deficient. The deficiency can be overcome by using fertilizers.

Keywords: Physio-chemical analysis, soil, Bazpur, nutrients, micronutrients.

1. Introduction:

Soil is completely weathered, fine particles, loose and friable, high nitrogen, nutrients are available and fertile. There are two basic concepts of soil. The first pedology consider soil as a natural entity, a bio chemically weathered and synthesised product of nature. Certain aspects, such as the origin of soil, its classification and its description are involved in pedology. The second is edaphology conceives of the soil as natural habitat for plants. Edaphology is the study of soil from the stand point of the higher plants. It consider various properties of soil as they relate to plant growth and production. The upper most loose layer of earth suitable for plant growth. The soil reaction and plant growth are interrelated, the reaction effects the nutrient of soil (Sahi, 2011). The crop yield in region were rainfall is adequate are determine more by soil nitrogen than by other minerals elements supplied by soil (Allison, 1957). Phosphorous plays a critical role in energy reactions in plants. The deficiency can influence essentially all energy requiring process in the plant metabolism. Phosphorous stress early in growing season can restrict crop growth which can carry through the reduce final crop yield. Deficiencies during early growth generally have a great negative influence on crop productivity, the phosphorous restrictions imposed latter in growth (Grant, Faltan, Tomasiewicz& Sheppard, 2001). In most developing countries including Nigeria, fertilizers are applied to soil by uneducated farmers without particularly making reference to the specific need of the plants of soil. The soil fertility

was evaluated with the symptoms, visual, plant tissue and soil testing in terms of predicting fertilizer equipment for crop in Nigeria (Soil Fertility Evaluation, 2012). The variation in altitude and climate differ natural advantage for crop diversification. As such alternative strategies related enterprises viz horticultural, forestry, floriculture, medicinal plant need to strengthened. Besides, less numerative crops can be replaced with more profitable crops on rotational basis (Tuteja, 2013).

Bazpur is a Tehsil in Udam Singh Nagar district in the state of Uttarakhand, India with cordiantes 29.17^0 N, 79.16^0E. Hindi, Punjabi, Bangali and Kumauni are main languages. It is an affluent town mainly due to large agricultural estates. It is the part of Tarai region (Bazpur-Wikipedia). Agriculture is the primary occupation of people as it justify the name 'Chawal Ki Nagari'. Khariff and Rabi are two major cropping season. The main Khariff crops are Rice, Soyabean, Urd, Moong and Til, and Rabi crops are wheat barley, gram, Masur, Mustard, Sunflower in Udham Singh Nagar (Udham Singh Nagar at a Glance). The monitoring of soil quality can improve the fertility of farm land in Bazpur.

2. Literature Review:

The elemental and nutritional values of any farmland after physio-chemical examination can improve the fertility (Sahi, 2011). The soil sample obtained from motor vehicle repair station at Rishikesh Uttarakhand are highly contaminated with polycyclic aromatic hydrocarbon (PAHs) and bioremediation is suggested by using microbes (Bahuguna, Lily, Munjal, Singh &Dangwal, 2011). From the study covering the advent of spring and early summer months, it is easily conceivable from the result that sal forested soil in this region does not show any deficiency of plant nutrients. The undistributed side had greater production, higher decay rate and higher population of bacteria and fungi, all have contributed to the nutrient enrichment in soil (Sharma, Arunchalam&Arunchalam, 2017). The chemical characteristic of soil vary from place to place, slightly alkaline to acidic while highest amount of organic carbon is recorded from valley plane and decreasing towards valley bottom. It is probably due to accumulation of humus from the top of the hills to valley plain caused by surfaced runoff. The study reveals that the land forms and soil development in area is governed by weathering, erosion and the deposition by both fluvial and gravitational process (Sharma & Joshi, 2018).

The soil and topography are not suitable for monocropping mixed agricultural practices need to be updated. The diversify agricultural would be healthy mixed of animal husbandry including cattle rearing, poultry, fishing, bee keeping extra. There is urgent need to improve productivity of crops and livestock. It is also important to introduce organic farming practices to enrich soil and increase soil depth for sustained development of agriculture in the long run in Uttarakhand (Singh, 2017). The mean content of non sulphur was maximum in high Sulphur category followed by low and medium sulphur soil (Singh, Singh, Srivastava & Singh, 2009).In the plant physiological investigation the research is vital foundation of the great fertilizer

industry, agricultural experiment stations are lending important aid but they have many fold demand on their resources (Hoagland, 1931).Organic agricultural system should included which begins to consider potential environmental and social impacts by eliminating the use of synthetic fertilizer, pesticides etc. The camps, rally and training program for the farmers should be arranged for increasing awareness regarding the benefit of organic agriculture, bio fertilizer etc. In crop production and these by improving soil fertility and nutrients status (Deshmukh, 2012).The land degradation process is generally divided in three classes, i. physical degradation, ii. biological degradation, iii. chemical degradation. The physical and chemical properties are deteriorated due to soil desurfacing. All the major nutrients needed for plant growth have decease significantly in desurfaced soil as compared normal soil. Organic matter, which is considered the reservoir of all nutrients has depleted more than fifty percent in desurfaced soil (Singh, Devi &Hooda, 2015). The strength characteristics of soil are affected expensively due to change in soil's internal structure and mineralogy. The data obtained during the experiment is an indication that alteration in soil properties due to pollutants must be assessed for drawing safe design criteria for upcoming civil engineering structure along Yamuna riverbed (Mandal, Vyash, Chandra, Ankur & Yadav, 2015)

3. Methodology:

The soil samples collected from soil surface of different village sites from farmland of Bazpur. The main center point was Bazpur bus stop. The four village sites considered for samples in different locations as mentioned in below the table.

Table 1: Selected Village Sites.

Sr.No.	Direction	Name of Village and code	Longitude	Latitude
Site 1	North	Barhani Mauna (BRMABPUR)	29.1176^0	79.1743^0
Site 2	South	Chakarpur (CHAKBPUR)	29.1356^0	79.1468^0
Site 3	East	Barwala (BRWLBPUR)	29.1066^0	79.1852^0
Site 4	West	Narkota (NRKTBPUR)	29.1752^0	79.1376^0

All samples were collected and dried under shade and analysed at Regional Soil Testing Rudrapur (Udham Singh Nagar) with help of these available instruments in there laboratory. The instruments are pH Meter- pH determination, Electrical Conductivity Meter- EC determination, Colorimeter- Phosphate, Boron determination, Flame Photometer- Potash determination, Atomic Absorption Spectrophotometer (AAS)-Micronutrient determination, Spectrophotometer- Sulphur determination, Organic Carbon - Titration methods.

4. Result and Discussion

The obtain results are summurized below these tables.

TABLE:2 Site -1 Barhani Mauna (BRMABPUR)

S. No.	Parameters	Result	Unit	Evaluation
1	Ph	7.9		Normal
2	Electrical Conductor (EC)	1.07		Normal
3	Organic Carbon (OC)	0.88	%	High
4	Phosphorous	9.0	Kg/h	Low
5	Potassium	93	Kg/h	Low
6	Sulphur	10.48	ppm	Normal
7	Zinc	1.42	ppm	Low
8	Boron	0.18	ppm	Low
9	Iron	115.9	ppm	Normal
10	Manganese	5.49	ppm	Normal
11	Copper	1.682	ppm	Normal

TABLE :3 Site -2 Chakarpur (CHAKBPUR)

	Parameters	Result	Unit	Evaluation
1	Ph	8.0		Normal
2	Electrical Conductor (EC)	0.91		Normal
3	Organic Carbon (OC)	0.40	%	Low
4	Phosphorous	4.5	Kg/h	Low
5	Potassium	107	Kg/h	Low
6	Sulphur	9.34	ppm	Low
7	Zinc	0.78	ppm	Low
8	Boron	0.91	ppm	Low
9	Iron	63.70	ppm	Normal
10	Manganese	0.78	ppm	Low
11	Copper	1.35	ppm	Normal

TABLE :4 Site -3 Barwala (BRWLBPUR)

S. No.	Parameters	Result	Unit	Evaluation
1	Ph	8.0		Normal
2	Electrical Conductor (EC)	0.95		Normal
3	Organic Carbon (OC)	0.61	%	Medium
4	Phosphorous	9.0	Kg/h	Low
5	Potassium	135	Kg/h	Medium
6	Sulphur	10.14	ppm	Normal
7	Zinc	0.42	ppm	Low
8	Boron	0.45	ppm	Low
9	Iron	37.76	ppm	Medium
10	Manganese	1.906	ppm	Normal
11	Copper	1.354	ppm	Normal

TABLE : 5 Site -4   Narkota (NRKTBPUR)

S. No.	Parameters	Result	Unit	Evaluation
1	Ph	7.8		Normal
2	Electrical Conductor (EC)	1.10		Normal
3	Organic Carbon (OC)	0.59	%	Medium
4	Phosphorous	36.0	Kg/h	High
5	Potassium	82	Kg/h	Low
6	Sulphur	11.21	ppm	Normal
7	Zinc	1.731	ppm	Low
8	Boron	0.41	ppm	Low
9	Iron	30.92	ppm	Normal
10	Manganese	4.590	ppm	Low
11	Copper	1.68	ppm	Normal

5. Conclusion

The various results obtained from soil analysis reveals that the some village sites are deficient for organic carbon, phosphorous, potassium while some village sites are enriched with higher values. Variations in iron, magnesium boron, copper, sulphur has been also observed in different sites. To improve the fertility of Bazpur soil farmland

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can be maintained by using fertilizers and bio fertilizers. The recommendations obtained from regional soil testing laboratory are composed in the table- 6.

TABLE :6   Recommendation of Fertilizer

Site	Diammonium Phosphate (DAP)	Urea	Mutrate of Potash (MoP)	Zinc Sulphate (ZnSO$_4$)	Borax	Manganese Sulphate (MgSO$_4$)	Compost
Site 1	67.8 kg/hect.	64.8 kg/hect.	34.7 kg/hect.	-	2-4 kg/hect.	-	-
Site 2	67.8 kg/hect.	143kg/hect.	34.7 kg/hect.	-	2-4 kg/hect.	56-112 kg/hect	40 qtl./hect.
Site 3	67.8 kg/hect.	103.9 kg/hect.	26.7 kg/hect.	6-10 kg/hect.	2-10 kg/hect	-	40 qtl./hect.
Site 4	36.5 kg/hect.	116.3 kg/hect.	34.7 kg/hect.	-	2.4 kg/hect	-	28 qtl./hect.

6. Acknowledgement

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SMART POWER MANAGEMENT AND CONTROL OF DOMESTIC APPLIANCES

NoorulHamitha B [1], Devie P M [2], Abdul Raheem M[3], Shankar Ghanesh S[4], Surya N[5]
[1]Assistant Professor, [2] Research Scholar, [3-5] UG Student
Department of EEE, Kamaraj College of Engineering and Technology, Madurai

Abstract

For energy management process, the monitoring and control of devices plays a key role in the implementation of load control strategies. For effective control, all electrical loads connected need to be monitored. Personalized frequent monitoring required for automated control and even for appliance fault identification. With more numbers of loads being controlled, the sophisticated switching controller is needed for efficient operation. Smart controller helps to achieve better control of various loads using automation technologies. In this work, smart controller hardware is implemented with Internet of Things (IoT) application. The voltage and current values are measured at each node using sensors and the controller can control 32 to 64 different types of loads.

Keyword*s*: Home Energy Management, Internet of Things (IoT), Smart Controller

1. Introduction

In the emerging frontiers of technology, automation evolved in the almost every field of engineering. The recent automation technology adopted for monitoring and control is Internet of Things (IoT), being implemented in various process control. This IoT technology is utilized for home energy management system through effective control to save energy costs. With monitoring of power, current and voltage consumed by each domestic loads, the energy saving can be achieved through scheduled control of home appliances. Ever-growing technology benefits the society contributing with low cost design products. A low cost, flexible and secure cell phone based home automation system is proposed in [1]. Bluetooth based wireless communication system allows automated control of different types of devices with secure password protected software application. Recently, android web- based application getting significance in the device automation and control. In [2], smart energy efficient home automation system is proposed and it controls the home appliances from remote location. A multimodal application based home automation using voice recognition command through a web based application.

With increasing rate of energy consumption, the need for energy management system is of great deal and adopting the suitable automation technique enable to handle the challenges of implementation. Being a massive and worldwide evolving technology, Internet of Things (IoT) provides the framework for interconnected smart electronics network with proficient communication technology. The proposed work [3] provides the smart home management system activated by microcontroller; an efficient lighting system has been designed and implemented for reducing the energy consumption to reduce the energy usage through an effective control of residential appliances. With prime objective of reducing the energy consumption, IoT find many applications in energy management and eliminates the avoidable power wastage. The targeted objective

can be achieved by monitoring and analysis of every-minute energy consumption of residential load using suitable sensor, control and communication system. In [4], multi-user mobile application based energy monitoring system is proposed to manage the energy consumption. Through microcontroller based switching of loads, a possible extent of 50 % energy savings is achieved for some cases.

Energy saving not only impact on cost cutting technology but also environmental issues by reducing the energy consumption at higher levels. Though many energy saving products are commercially available for home energy management system, an integrated intelligent home control system is proposed in [5] using wireless smart socket and IoT technology. This scheme reduces the energy usage without sensor deployment and adopting four modes of control namely peak-time control, energy-limit control, automatic control and user control. For implementation of intelligent controllers, a day ahead scheduling will be useful to achieve better saving. A detailed review on home energy management system is presented in [6], also its implications with demand response factor, intelligent controllers and smart technologies is studied. In [7], the multiple knapsack method is used for optimal scheduling problem and a day-ahead schedule is evaluated for consumer bill reduction. The monitoring of energy usage is possible through suitable measurement module in terms of accuracy and reliability. For accurate monitoring of residential loads, the voltage sensor module calibration using ZMPT101B is discussed in [8].

For efficient scheduling of residential building loads, a suitable strategy for energy management control is essential. Energy Management Controller initiates a sophisticated tool for monitoring and controlling buildings energy needs. To reduce the energy cost by optimal scheduling of residential appliances, an intelligent controller is proposed [9] for energy management. In [10], a multipurpose, low cost, smart switching controller is designed and the prototype has been effectively implemented to provide promising results in real-time testing scenarios. In optimal scheduling, the analysis of user energy usage pattern recognition is vital part so as to design the suitable controller. The different energy consumption pattern of consumer such as Active, Away or sleep is deducted using Hidden Markov Model (HMM) algorithm [11] for better control.

A network enabled digital control is inevitable for smart controller of energy management system. It increases the device connectivity which enables better monitoring and control of appliances for energy saving in home automation. Rapidly growing network technologies of wired and wireless communication systems serves the key purpose of network enable digital control. An optimally scheduled load management system with LABVIEW based switching control is developed [12] using ZigBee network. A ZigBee based flexible home automation system is designed [13] with integrated wireless for common home gateway. An overview of various works demonstrated in the field of smart home energy management is presented in [14].

2. Home Energy Management System

A home energy management system is an essential entity for demand side smart grid operation and also acts as key factor for optimal performance of smart home. In total electricity demand, almost 60% contributed by the residential energy consumption forming a major portion. Hence, a proper prediction of energy usage in residential sector

is very significant. Residential building being accounted for large part of the total energy demand, the home energy management system is an important part of the smart grid and has many benefits such as:

✓ Reduction of the electricity bill

✓ Reduction of demand in peak hours

✓ Meeting the demand side requirements

One of the objectives of Home Energy Management System (HEMS) is to decrease the peak demand of households by controlling power intensive loads and also it take into account the comfort and priority of the consumer. Home energy management system allows the households to regulate power of the smart devices after reception of a signal from the service provider. The importance of cost control is to change the load curve shape in such a way that energy consumption peak decreases, though the total consumption for the specific household is the same.

For proper functioning of a home energy management system, efficient energy prediction of home appliances in houses is of great significance. This system is able to determine the best energy assignment plan and also offers a good compromise between energy production and energy consumption. The Home Energy Management System is mainly composed of Smart plugs, Gateway, Web server, Database and a user devise.

The Home Energy Management market is rapidly expanding alongside substantial investments to improve energy efficiency and upgrade electricity infrastructure to a smart grid. These changes enable consumers to take greater control of their energy use, which can be enabled through the use of Home Energy Management Systems (HEMS).HEMS can be broadly defined as those systems (including both hardware and software linked together via a network) that enable households to manage their energy consumption. This can be done in one (or both) of two ways:

1. HEMS provide information about the consumer energy consumption and timely commands to modify consumption.

2. HEMS can provide control access of house appliances to the household residents which control the energy consuming processes of the home via a smart phone or web service based application.

It enable the delivery of a wide range of both consumer and utility objectives around energy management, financial benefits, sophistications, reduced carbon footprints, also ensures access to a reliable energy supply.

2.1 Energy Management Control Strategy

Energy Management can be implemented in power system can be broadly classified based on the type of grid in which it is employed as shown in Fig.1. For real time, stand alone and grid connected system, the various mathematical modelling approaches has been developed via linear programming and artificial intelligence methods. But, the energy management schemes for the residential consumers fall into the smart grid category. The implementation can be performed through selection of suitable communication strategy. The relays operating the loads can be controlled by the web or

mobile based application via communication protocols such as Bluetooth, ZigBee, wireless network, etc.,
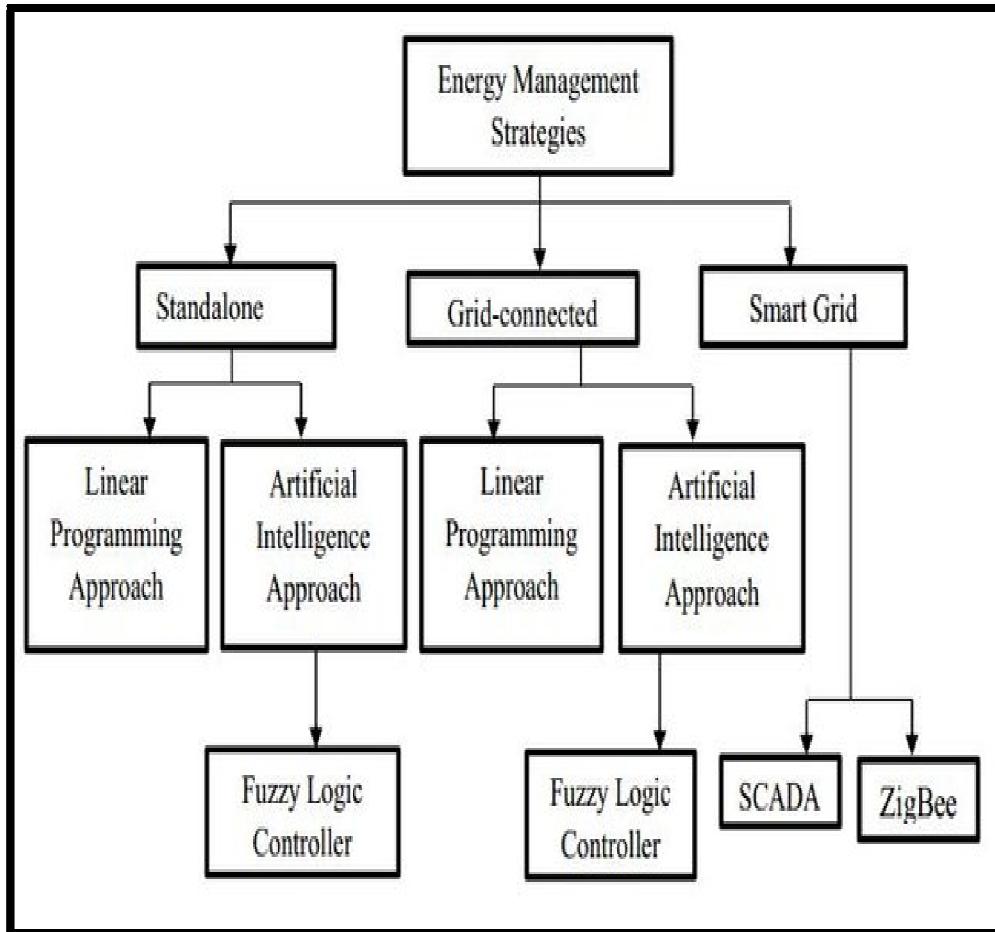
Fig.1 – Energy Management Strategies

3. Proposed Design of Energy Management Controller

The smart switching controller is designed using microcontroller and hardware design is developed as shown in connection diagram Fig. 2. The voltage and current drawn by the load is measured using Voltage Sensor (ZMPT101B) and Current Sensor (ACS712). The signal sensed were given to the control circuit of the controller and to the relay switching circuit which in turn get controlled by the adruino microcontroller. Based on the values of load current and voltage, the initial data for power management module get generated, the required switching control is evaluated as result of energy management schedule.
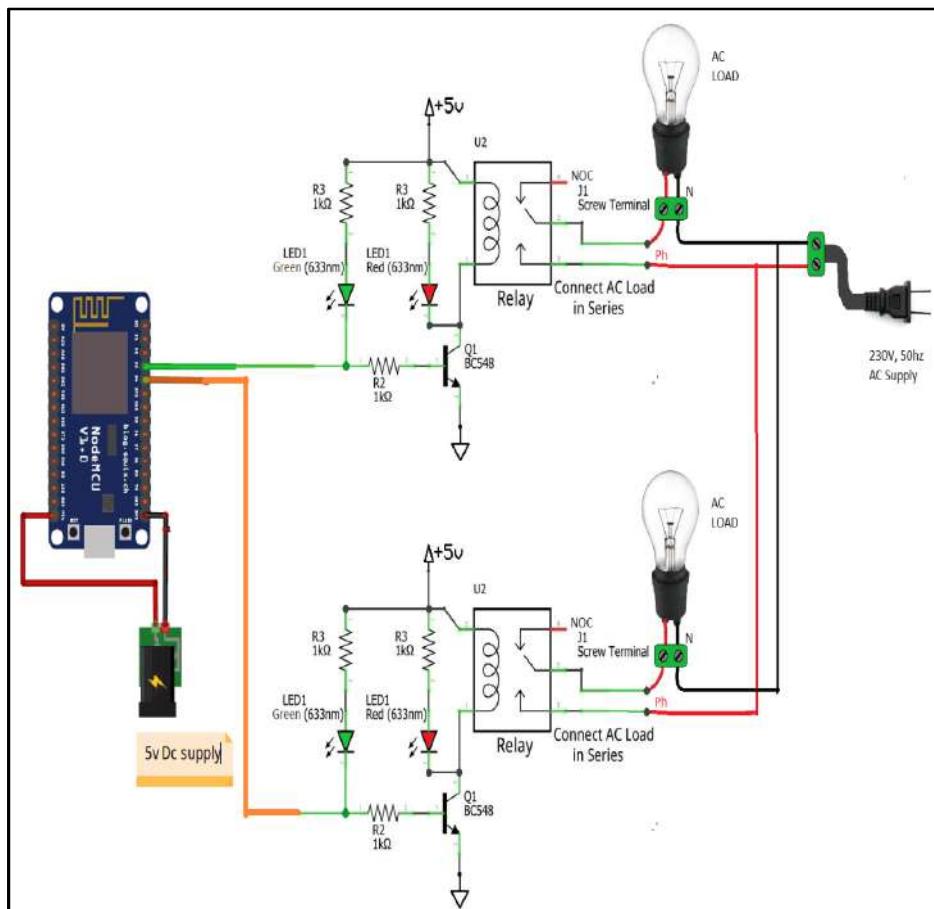
Fig.2 – Hardware Connection Layout

For the resulted control action, the relays were operated accordingly to on/off the connected load. In this design, the operational flexibility is achieved through switching controller with coordinated relay performance. The hardware components used and its specifications are listed in Table-1 below.

Table – 1 – Component Portfolio

Components	Specification
Node MCU (ESP8266) and Arduino UNO	28 pins Operating voltage 7—12V Flash memory-4MB 80—160 MHz Clock Frequency

Voltage Sensor (ZMPT101B)	Input Range 0—25V DC Output Range 3.3—5V Resistor value – 30K/7.5K ohm
Current Sensor (ACS712)	Input range 3.5—5.5V Output range -20A—20A Sensitivity 100mV/A
LCD Display (1.3inch)	Number of Pixels—128 x 64 Voltage range 3—5V Current range 40mA Pixel Pitch(mm)—0.23 x 0.23

4. Hardware Setup & Results

The switching controller hardware setup is designed using adruino microcontroller and node MCU as shown in Fig.3. By connecting the load, the energy management schedule operated in such a way to effectively operate the connected load. The switching control signal is given to relay and non-priority load get disconnected using relay operation.
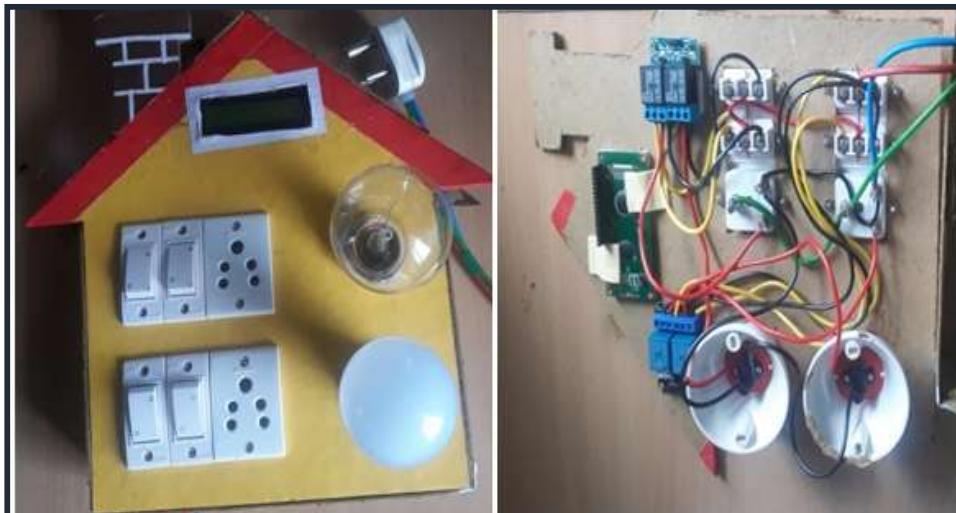
Fig.3 – Hardware Setup – Panel View & Backend Components View

5. Conclusion

In this work, the switching controller is designed for handling 32 to 64 different types of electrical loads. Also, the voltage and current sensing module is developed for signal measurement for energy management evaluation. With increased number of loads, the switching controller performs well with efficient control. This work can further be extended to operate in online platform using Internet of Things (IoT) application interface. The application can be executed in suitable web interface with energy management schedule.

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"LOOM: THE WEAVING TOOL OF ASSAMESE CULTURE"

Ms Sanjukta Baruah
Research Scholar, Department of Assamese
Gauhati University, Guwahati - 781014, Assam, India

Abstract:
Assam is a state of India situated in its north eastern corner, spread across an area of 78,438 square kilometres covering the areas of Brahmaputra and Barak Valleys along with the hills of KarbiAnglong and Dima Hasao. The State of Assam, famous for its tea and the one-horned rhino, is a place very rich in cultural diversity. One significant item having an important role in the rich Assamese culture is the loom (handloom). The loom is a traditional device for weaving cloths. The basic needs of human beings are: food, shelter and clothing. People across the world used to prepare cloths for wearing by hand in various types of looms before invention of weaving machines. The significance and role of handloom in the traditional life of Assam is discussed in this research paper "*Loom: The Weaving Tool of Assamese Culture*". The Assamese handloom has traversed a long distance and has seen significant growth and development from rural traditional ways to the commercial realms. The invention of loom, its methods, rules, necessity are discussed in the research paper in Descriptive Method and Scientific Method.
Keywords: Loom, traditional, woman, weaving, culture, yarn.

0.00 Introduction:
The loom (more specifically, the handloom, as opposed to the machine loom) is an important aspect of the cottage industry of Assam. It is an indispensable part of domestic life of traditional Assamese society. Especially for a woman, the loom is a huge necessity in every step of her life. Among the women in the rural areas, whether in their maiden lives or that as home- makers, along with their duties in the agricultural fields and their domestic work, working on the loom is a part of life in every household. Of course, it is not entirely absent in the lives of women living in urban areas as well. The loom manifests the expertise, imagination, perseverance and the aesthetic sense of the Assamese woman. Clothes woven as symbols of love and affection invigorates the inter-personal relationships. In the past, in Assamese society, women who did not know how to weave were called such derogatory names as "*thupri*" or "*akaji*", which literally means one who is good at nothing. On the other hand, a woman who is an expert in creating flowery patterns in clothes is called as a "*kaji*", literally meaning skilful. There are historical narratives of Assamese ladies manually ginning and carding cotton, spinning yarn in the *jatar* (the spinning wheel), laying out the yarn, and weaving special clothes called "*kabashkapor*" or corselet or armour cloth, for their husbands and sons going to battle, within a single night. This cloth was believed to protect warriors. Assamese tribal ladies too have been contributing to the field of culture through the loom. They have not only been making traditional dresses, but also other items which they even export to other countries. On his visit to Assam, on seeing the clothes which

'dried in shadows and could be hidden in the fist', woven by Assamese ladies, Mahatma Gandhi famously remarked that Assamese women created flowers of dreams in the loom. The loom has found mention in Bihu songs, as –

> Sitting on the loom
> Feet on the treadles
> My beloved, come
> In this *Bohag*

Bihuan, the special gift of love in *Bohag Bihu*, the spring festival, is woven with utmost care and longing in threads steeped in love. And the beloved returns that gift under the sacred fig standing in the middle of the paddy field, by wrapping a beautiful inflorescence of *Kopou Ful* (an orchid, *Rhynchostylis retusa*) on the maiden's hair bun. The *bihuan* or *gamocha* is also called as a *dohatiya* in some places. In and around Barpeta, the *bihuan* is called as *bihoija*. In order to make *bihuans*, fifteen *tola* of yarn is boiled in water with a little pounded wheat as starch treatment for yarn sizing and dried under the sun and then collected on the bobbin. While setting out to weave *aankatagamocha* or *bihuan*, an auspicious day is chosen to lay out the yarn. Tuesdays and Saturdays are normally avoided as per age old custom. Another name for *aankata*cloth is *kabash.Bihuan* means the cloth items exchanged as gifts amongst relatives and friends during the Bihu, although in practice it chiefly indicates the *gamocha*. Cloth that is left to be woven after the Bihu is called as *bihuchera*. There is a common belief that *bihuchera* items should never be given to any male.

0.01 The innovation and development of the loom:

The earliest humans used barks of trees and animal skins to protect their bodies from cold, and to protect their modesty. Later, humans started using animal fur and tree fibre to make covers for themselves. Then they learnt the ways of making yarn from cotton and similar substances. On a pottery dish found in Egypt dated to about 4000 BC, one can see engraved the first picture of a loom. A Mesopotamian coin belonging to a later period also bears an image of a loom. Man must have learnt to build and use the loom before the time of these images. It has been proven that clothes were woven even around 8000 BC, in the Neo-Palaeolithic era. Some bobbins made of animal bones and pieces of rocks with thread wound around them have been found which belong to that age. Plain and smooth floors are required for floor looms. In dry places like those in Egypt, there was no difficulty in laying out such elongated looms. But in regions where one could not count on the weather, instead of laying out looms horizontally on the ground, people started hanging them vertically indoors. Silk clothes were beginning to be woven around 2000 BC in Europe and around 500 BC in China. Narrow looms need lesser space. Tribes living in hilly areas like Arunachal Pradesh and Mizoram use narrow looms. Looms used in middle Asia around 100 BC were narrow.

0.02 Parts of a loom:

Different parts of a traditional handloom are generally made of wood or bamboo. Some parts of such a loom are as follows: posts made of *bhalukabaah* (a sturdy variety of bamboo, *Bambusabalcooa*) or saal wood, yarn, *bar chereki*(where yarn is wound), ugha, bobbin, bobbin frame, *dang mari* (beam), *raas* (reed), *raasbharua* (a brass needle to

insert thread in the reed), *mahura* (a bobbin of a piece of a hollow reed), *kanatdiya, jakhala, chalimari, nachani, nachanijori, taldhara, garaka, kakara, gari, muthi, cheri, phoolcheri, jatar* (spinning wheel), *garakabari* (treadle) ,*balandiya, sarukathi, sunga, tolotha, phooltolakathi* etc. Assamese women weave clothes from eri, muga, paat (Mulberry silk), and mejankori yarns decorated with flowery patterns made from golden threads in their looms.

Looms are generally of two types: *Taantishaal* and *Maatishaal.*

Assam's paat and muga clothes have acquired a special status in the world market. In the pre-independence era, the khadi cloth earned popularity because of Mahatma Gandhi's use of the *jatar* (the spinning wheel) to spin yarn. It must be mentioned here that the BrindabaniVastra, which was woven at Tantikuchi of Barpeta district in the sixteenth century under the guidance and supervision of MahapurushaSankardeva is a great example of handloom weaving in ancient times. Various episodes from the life of Sri Krishna are depicted in this. A young Sri Krishna along with his friends grazing the cows in the field, having fun, killing asuras etc are presented in a pictorial form woven in the cloth. The BrindabaniVastra measured 80 haat (one haat is equal to 40 cm) by 60 haat, which is equal to 32 meter by 20 meter.

The handloom symbolises a rich heritage. In *Harshacharita* of Banabhatta, the quality of the art of weaving in ancient Kamrupa is quite evident. The terms, 'subarnakunja' and 'patrorna' mentioned in Kautilya's*Arthashashtra* are indicative of the antiquity of the craft of weaving. In some places of lower Assam, there is a ritualistic practice called 'ahila puja', where the loom is worshipped. Songs describing the processes of weaving are sung in those occasions. Mention of soft, high quality silk clothes is found among gifts of seventh century Assam king Bhaskarabarma. Girls were imparted such practical and useful learning in the Vedic era.

0.03 Processes of the loom:

At the very beginning, the weaver has to insert the selected thread of any colour in the grooves of the *barchereki*. The yarn can be any of different types – *masrise, balom, koritola, pondharatola, terotola, dahtola, pakoasuta* etc. Threads of different colours can be used to make *gamocha* or *bihuan*. For example, different coloured threads can be used as warp and weft, or red stripes or borders over white. After inserting the thread in the *barchereki*, the thread has to be transferred to bobbins in a *jatar*. The number of bobbins go up proportionate to the size of the intended output. Bobbins are usually made of wood or plastic. Then one should choose a wide open space, a courtyard, where *khuti* (which literally means a stick) and *khutichiri* are pegged to the ground at two ends. The space in between them is equivalent to the total length of the cloth to be woven. Now the bobbins readied in the *jatar* are placed in the middle. The ends of each thread in each bobbin are taken together and taken from one end to the other and wrapped around *khutis* and *khutichiris*. This process goes on until all the bobbins are emptied of thread. This process of walking to and from between the *khutis* and *khutichiris* repeatedly wrapping the thread is called as *taat-bati*. When this process is finished, the *khuti* is removed and a *dangmari* is inserted in its place within the thread bundle. Then begins the tedious and time taking process of inserting two threads in each gap of the *raas* (reed) with the help of a *raasbharoa*. This is a complex process that needs utmost

care. When the threads are fully inserted in the *raas*, it has to be slid to the other side along the threads passing through it. Then the entire yarn layout has to be wound up with the help of a *tolotha*, and taken to the other end. A *chiri* is inserted in the yarn. When the *raas* reaches the other end, the thread ends are loosened, and the entire yarn is wound around the *tolotha*.

The next phase is the process of *ba-tola* (the process of fixing heddles), in which thicker threads are used for separating alternate warp yarns so that a shed can be created for the weft to pass through. For this, bamboo or plastic cylinders are used. The '*ba*' are fixed to a small *chereki*. They are joined to some *chipkathi*, and passed over the *chiri*. Every warp thread has to pass through a *ba*. After all that, the whole set-up is placed on the loom frame. The *raas* (reed) is passed through *durpoti*. Then the *mahura* (a quill) is readied. The weft thread is wound around the quill and inserted into the *mako* (shuttle). The thin rod around which the *mahura* rotates in the shuttle is called *gerelimari*. Now, the loom is ready for the process of weaving.

In earlier times, the weaving thread or yarn was prepared from cotton or animal fur by scutching and manually spinning it on the reel. But it was a very time consuming process. In the middle of the eighteenth century, an English inventor named Samuel Crompton (1753-1827) invented the spinning mule which started a new era in Europe. John Kay of Lancashire, England, invented the flying shuttle in 1733.

0.04 Examples of cloths produced in Handloom:

In Assam, the weavers produce a variety of cloth items in the handloom, such as, *chadar-mekhela* (a two piece female dress), *rumal* (handkerchief), *gamocha, tolsora, riha, murat bandha* (head scarf), various clothes required in religious rituals like puja etc, *gosainkapor, chelleng chadar, panigamocha, kakalbondha, mekhela, tongalibondha, tamolbondha, hasoti* etc. They create beautiful images of birds like the peacock displaying it's train, flying maina, eagle etc. with coloured and metallic threads. In clothes used to adorn the *singhasan*, a seat where idols or sacred Vaishnavite texts are kept, and in *gosainkapor* (literally God's cloth), images of *gosa* (lamp stand), earthen lamp, *sorai*, incense stick stand, words like 'Ram' etc are created. Various designs such as banana plant, Indian fig, coconut tree, climbers with leaves like wood apple, *lihiri, kasori*, flowery patterns named as *chopachakoliphool, kerumuriaphool, athpotia, chapatiya, charipotiyaphool, lotkon, kolka, jon*(the moon), *tora* (stars), *pakhila* (butterflies), *rekha* (lines), triangles, and other geometric patterns are also created with deftness.

Women of various tribes such as Bodo, Rabha, Garo, Mising etc cultivate cotton and breed various worms from which they make their own yarns and produce their essential clothes themselves. They rear muga (Assam Silkmoth) and eri (Sambiaricini) worms and spin yarns from them with their own hands, and weave spectacular paat, muga clothes to gloriously represent their cultural heritage at world stage. SurjyakumarBhuyan in his '*Buranjir Bani*' has written that during the reign of SwargadeuPratapsingha, it was compulsory for each household in Assam to contribute annually an amount of one 'powa' (roughly 250 gms) of silk yarn to the royal treasury. In '*PuraniAsomarSilpa*', BhubanchandraSandikoi (Handique) has mentioned that clothes woven in our land were exported to China, Burma (now Myanmar), Nora land,

Gujrat, Kashmir, Delhi, Dhaka and Bengal, middle India, Sri Lanka and various places of north India. The annual revenue earned from cloth exports at Hadira and Phularachowky was to the tune of rupees thirty five thousand. *Gamochas* ornate with flowery patterns woven in Assam's looms have found mention in Hamilton's notes as well. Description of the handloom is found in Rigveda as well. Worship of the handloom is also a seasonal festival. This ritual is performed on Vijaya Dasami, before the immersion of Durga idols.

The SonowalKachari ladies wear a long *mekhela* which covers their body to the heels. They tie the *mekhela* on their chest (it's called *methani*). They wrap a traditional cotton cloth called *ekhetiya (ekathiya)* on their hips. Upper body is covered by a *riha*. They have started using various types of shirts as well in recent times. The males in SonowalKachari community wear *churiya* at the waist and shirt in upper body. Mising ladies wear a *mekhela* that they call as *ege*. They also tie it on their chest. They wear a shirt called *galug*. They wrap around a magnificent *chadar* over the *mekhela*. The head scarf they use is called *yapo*. During traditional festivals, it is compulsory for Mising gentlemen to wear *mibugalug* and for ladies to wear *ribi-gaseng*. Mising maidens use *dumpan* and *lakpun* while dancing, which are made from red woollen fabric. In Maran society as well, the womenfolk produce the necessary cloths at home. Their black *riha* adorned with bright red or yellow coloured small flowery patterns is recognised as their national dress. They also wear long *mekhela* which reaches the heels from upper chest. The cloth they wear at the hip is called *kakal-mora*. The *chadar* wrapped around upper body is termed as *parakani*. Maran men wear shirt, *churia* and head gear. The traditional Maran long-sleeve shirt worn by men is called *chaygun chola*.

In the Tai-Khamyang society, women folk wear a traditional *mekhela*, '*chino*'. The chief characteristic of this *chino* is it's dark black colour. On the lower part of the apparel they create big flowery patterns in white, yellow and other colours. The process of making *chinos* is very complex. A married woman of Khamyang society wear a *riha (longwat)* around the waist. This *riha* is of dark green, white or brownish-yellow (muga) colour. Normally, red or yellow thread is used in the border along the *riha*. The colourful belt they wear at the hip is called *chaikap*. In ancient times, there was prevalence of the handloom that's tied to the waist among them, which was called '*ki-hook*'. Tai-phake women wear colourful *mekhela*s which have lateral stripes. They also call it as *chino*. This *chino* doesn't have flowery patterns on it, but there is a lot of work with colourful fabrics. The men folk of Tai-phake societies wear a shirt called *chyu* and wear a cloth called *phanung* at the waist.

0.05 Conclusion:

To promote the use of handloom products and to encourage the weavers, seventh august of each year is celebrated as "National Handloom Day". Without the handloom industry, Assam's economy will remain truncated. Through the weaving industry, which is intimately connected with our national life, rural women have been making immense contribution to the state's economy. The Department of Handloom and Textile, Government of Assam, is making plans to strengthen the economy of Assam by implementing various development schemes of State and Central Government. Because of the introduction of modern scientific methods, both production and income of the

people involved have been going up. The government has implemented a scheme called MGBBY (Mahatma Gandhi BunkarBima Yojana). The schemes being implemented by the central government are as follows:

1. WMS (WEAVER MUDRA SCHEME).
2. BLCDS (BLOCK LEVEL CLUSTER DEVELOPMENT SCHEME).
3. PMTTBY (PRADHAN MATRI JEEVAN JYOTI BIMA YOJANA).
4. IHDS (INTEGRATED HANDLOOM DEVELOPMENT SCHEME).

Similarly, following schemes can be mentioned from the names of schemes being implemented by the Government of Assam: WEAVERS EXTENSION SERVICE UNIT, HANDLOOM TRAINING CENTRE, FORMATION AND REGISTRATION OF PRIMARY WEAVERS CO-OPERATIVE SOCIETY, SETTING UP OF YARN BANK, ECONOMIC UPLIFTMENT OF WEAVERS THROUGH WEAVING, HANDLOOM CLUSTER DEVELOPMENT PROGRAMME UNDER SOPD-G, WORLD BANK FINANCED ASSAM AGRI-BUSINESS AND RURAL TRANSFORMATION PROJECT (APART) etc.

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A HISTORICAL STUDY OF WOMEN'S ADJUSTING ROLES ON URBAN INDIAN SCENARIO

Moupiya Dutta
M.A in Sociology, Rabindra Bharati University, West Bengal, Kolkata &
M.Phil Student, Women's Studies, Vidyasagar University, West Bengal

Abstract: In this paper I propose to discuss articles and texts that study gender differences in fundamental value orientation. We find substantial gender differences or rather gender inequality in many courses of our life. I purport to write a paper in comparison between the pre-independence and post-independence society on the value orientation that marks the gender differences leading to the adjustment of women role. The changes in gender roles are more evident since the late 19th century taking in consideration of feminism, women empowerment, education that resulted in role consciousness.
Since the 19th century women question became a part of the progress of Indian society but to all surprise it was not the women who stood for women's issues but rather the male reformers who took the initiative to bring the issues affront. It was the imbibed culture, custom and value that restrained women from speaking for them in the society. But distinct changes have taken place in post-independence. My aim is to discuss the gender differences in India due to value orientation and the changes that have taken place hitherto.
Keywords: Gender difference, Gender inequality, Gender role, values, pre-independence, post-independence, women.

In a country with a history spanning over 5000 years along with a multiplicity of languages, customs and cultural practices, a hierarchy based on class, caste, and variety of religion, it is not easy to draw all these different threads together and weave them into a pattern. In this paper, I make a modest aim to present a tour on the evolution of women's adjusting roles that are impacted by value orientation. And with the present generation and their value orientation, it is important that we learn and do a comparative study regarding the evolution of women's adjusting roles between the pre and post-independence of urban Indian scenario emphasizing on Bengal.

The history of women is not linear, nor does it have a well-organized structure, it is in fact, an integral, though mostly invisible, part of the saga of civilization. Its threads are closely interwoven with those of cultural, society, state and above all, with the lives of the people. Untangling the threads through the multiple layers of traditions is a fascinating enterprise (Desai & Thakkar, 2001). Women's duties as good daughters, good wives, and good mothers are well defined in the Indian patriarchal society. Wifehood and motherhood are accepted as pivotal roles for women. But the question that comes into mind – What defines a good woman? A good woman is one who has the character of being sweet, gentle, loving, caring, and ever sacrificing. Who describes a good woman? Taking in consideration of the historical sources an anonymous Sanskrit

couplet describes women as "She is life, a mother while cooking and serving food, secretary while he is working, a servant at his feet, courtesan in his bed and lastly earth-like in forbearance."

Some historical sources often provide an elitist and a glorious picture of the Indian woman in the past (Altekar). But during the 19th century, the birth of a girl child was still considered to be a mishap by many families in India and especially among the higher caste Hindus in Bengal. The pregnant wife would continuously pray to the almighty for the birth of a male child as that would enhance her standing in the family and also around the social circle. Thus the life of a Bengali girl would often begin under a shadow of reproach (Chakraborty, 1963). From the very inception of life, it is found that girls are unwanted in the family. From childhood, a girl might very well be brought up in relative neglect within the family. A value that a girl child is put into is according to its own status in the family. She would pick up from her mother the various cultures and feminine methods like 'bratas' propitiating deities and also the household work. From childhood, a girl is made to play 'Rannabati' (kitchen games) and 'putulkhela' (playing with dolls) which helps hone her feminine role. Through such games, she comes to know her role in the family and moreover in the society. From a very young age, she learns her daily chores like cooking for her family and mothering her children and moreover learning to be the perfect housewife in the family.

For the higher caste Hindus, marriages were considered auspicious at a very young age with high dowries to be paid as a societal rule. Through various literature, we do come across the Bengal scenario that was pre-eminent in pre-independent Bengal. Short stories like 'Ranur Pratham Bhag,' 1934 written by Bibhutibhusan Mukhopadhyay gives us a prominent glimpse where the story revolves around the premature housewifery of an eight-year-old Ranu who imitates the role of a veteran housewife like her grandmother. She spends her days in countless worries and does not have the time to finish her lesson for the first primer. This portrays the then scenario where girls were not much encouraged for education or even for minimal literacy. Ranu's paternal uncle whom she calls 'Mejka' was in a fix to provide Ranu with her primary lessons while the other family members seemed rather nonchalant. A child's role or rather a girl child's role is much precise and proficient at a very early age. And this is quite evident in the book when we find Ranu's father arranging for Ranu's marriage at a very early age. Bibhutibhusan has opened us the door to an inexhaustible treasure that laid emphasis on the conflict, the beliefs that led to the orientation of value for being a better woman or rather a better housewife. The young child Ranu leaves her home, her dollhouse for her in-laws.

Just like Bibhutibhusan's fictional character, Ranu, girls in an urban Bengali family would enjoy her life only for the 1st few years. But after passing her fifth year of life, characteristic responsibility would be passed on to her. It would be mostly the characteristics of her mother and also it was the responsibility of a girl's mother to orient a child according to the gender role like making her fit in a well Hindu Bengali home with arts of cooking, serving, orderly arrangements in a household and worship of family gods. Girls were more trained to serve their husband, to serve their in-laws and to live according to certain specified ideals of 'pativrata.' Attending school was not much prejudicial, where only a few could attend school. Attending school and receiving an

education was allowed only after taking permission from the elderly male members of the family as it was believed that education for women was sinful and that educated women are more likely to be widowed.

The married life of a girl was more constricted as she was considered to be almost a piece of property passing from one family to another. Traditionally among the Hindu law, no divorce was permitted thus making it a life-long affair. Among the upper-class section, the pardah system made women's position worse. From childhood, a girl was trained to be submissive and docile towards elders and especially towards their husband. However, though Bengali women and also Indian women, in general, were ignorant and mostly uneducated in the broad sense certain changes peeked in since the beginning of the 19th century when the women question became a part of the better discourse of progress in the country. Indigenous forces represented by the educated Indian male reformers, later on, took up the causes of women's education and worked towards its proliferation. The British government also responded by hosting schools and institutions of higher learning for women all around India. The agency for the spread of education lay with specific groups of people as well as certain Indian reformers that shared the same belief that no society could progress if its women were left backward. The colonial interventions have made the social reformers exposed to the western ideas and education and hence have led the reformers land to the juncture of women progress. At that time, the patriarchal domination was not challenged radically or even questioned by the gender relation; instead, they took to specific issues like child marriage, and sati to abolish from the society (Pande, 2018). There were only a few organizations and institutions that did talk for women, but it did not have an independent ideology as they took from what the male reformers stated. Women were more seen as a passive recipient of a more humanitarian treatment that is to be given by western educated elite males. Thus education for girls was a means towards their adjusting roles as education was not meant to equip them to be self-sufficient independent and emancipated so to follow some profession but to be a good housewife, the mistress of the home and the hearth.

During the time of independence, women also joined the struggle against colonization, but while they were encouraged to participate by leaders like Gandhi, their work in the struggles was just an extension of their domestic work. It was no doubt a great leap for the Indian women to come out from their private sphere and expected gender role, but even in the public sphere, it was basically the extension of the women's role in the domestic sector.

Gandhi however, could draw in a large number of women to the political arena by giving a comprehensive meaning to Swaraj and helping them find dignity in public life. The manufacture of salt in defiance of the British laws prohibiting such manufacture had a lot of symbolic value for women as they brought a large number of women to the forefront with Gandhi at the Dandi march. Gandhi firmly believed that a girl's orientation since her childhood makes her nature non-violent and hence would be more successful in carrying out his programs of picketing and non-cooperative movement.

Though women were seen as an active participant in the freedom struggle, they were only seen in supportive roles. The male leaders did not encourage a second line of leadership, and women could assume leadership only when the eminent was in prison. Women had their power and ability to perform equally as male, but none male did ever

thought that the female could be in the forefront of the national struggle as well. Even the women then never thought to fight for their place despite their capability since women were taught to be in the supportive role and be the protagonist only when the male is absent whether in the family or national struggle. Even the women that got visibility were from elite families, whereas there were thousands of women unacknowledged and virtually unknown, who sacrificed everything they had for the nation.

However, women's uplift came initially from the 19th century when female infanticide was banned; sati abolished and also widow remarriage legalized. While female education got encouragement, their struggle against patriarchal domination along with national struggle remained unresolved until the independence. After independence, Indian women did not face much difficulty in seeking their voting rights like America and British. Women did get complete equality in the constitution of India that casts a duty on each citizen to give up the custom and inbuilt rooted practices which may be regarded as offensive and derogatory to women. Despite the innumerable laws, international treaties and declaration, the fate of women have not completely changed, and certain sections have seen no change at all. Even today, culture, class, religion plays the propellant role where women are still taught to be docile and submissive to the male members of the family.

 However, educational development has made its impact, and also awareness caused by the government has contributed towards inevitable development for women and hence towards certain changes in the role orientation of women, as well as the male in the society.   Nevertheless, post-independence one can trace the evolution albeit slow of new beliefs shaping their goals, attitudes, and activities. What began to emerge although in an embryonic form is the attempt to change women's subordination under patriarchy that was found evidently in the pre-independent upper-middle-class Hindu society and also upper-middle-class Bengali family (Ray, 1991). Bengali women started disputing the construction of artificial differences between male and female nature. Such ideological disparity was much evident among the fictional debate by Kamini Ray. Even prestigious journals like 'Navabharat' asserted that marriage has its uses, but it was not just the only objective of a girl's life. These have been influencing young female India's mind. The prevalent changes among the Bengali family were much prominent as women started taking education not only to be a better housewife but to take up jobs as office girls hence contributing economically towards their family. It is also revealed that men in Urban India supported women working outside their homes, similarly with an overwhelming acceptance of gender equality in salaries.

A significant change was evident after the raising of girl's marriageable age by law like the Prohibition of Child Marriage Act, 2006, which fixed the marriageable age for girls at 18 and 21 for boys. This raising of the age accelerated educational opportunities that enabled girls to formulate their ideas of marriage, which they were unable to do before. Education has been a necessary precondition for women's empowerment as it had contributed positively not only in holding organizations for the promotion of womanhood but also enlightened the society at large. The result of this is that today, India has the world's largest number of professionally qualified women. In fact, India has the largest population of working women in the world and has a number of doctors,

surgeons, scientists, professors than the United States (Banerjee, 2012). Earlier in an upper middle-class Bengali family, the mother-in-law played as the protagonist to perform evils towards their daughter-in-law now in contrary especially among the urban Indian Bengali family women resents their domination by their in-laws.

Such striking changes within the contemporary urban Indian society in large have examined the women's status in various areas. The picture that emerges is both positive and negative in the Indian scenario as well in Bengal scenario. While on the one hand, India has seen an increased percentage of literacy among women; on the other hand, there are a significant minority of men who believe that it is unacceptable for women to work. One in five men surveyed disagrees with women working outside their homes (Kwatra& Alexander, 2019). Further, a significant portion of urban Indian believes that a women's family wealth should determine their decision to work. If one looks at the comparative study of women's role, one will find a sheer change, but the change persists only among some specific sections of the society. Education has not yet brought a radical change in the situation. Thus in this comparative study of the women's adjusting roles, on the one hand, we see women taking up roles of their counterpart as a part of equality, on the other hand, she is still mutely suffering subjugation and domination along with sexual harassment and abuse in workplace and family. A working woman not just has to handle her work stress but also her family stress, thus bringing in to some extent, double the burden.

However, with the evolution of the society, the contemporary urban Indian educated women are much head strong and aims to speak out against their harassment whether facing in public or private which is very much unlikely than pre-independent India. Recently the new campaign that trended India was the #MeToo movement that revealed women's personal experiences regarding the harassment at the workplace (Nirola, 2018). The #MeToo movement has brought many fearful women out of the shadows. But in India, the movement reached only urban areas; only a few institutions or workplaces. The women who spoke up are mostly from the 'higher classes' of society, There are far fewer from middle-class families, and the numbers from rural areas are almost equal to zero. Therefore, the core problem with this movement was that #MeToo has not reached all sections of women in society who are needed to be aware and made conscious regarding their gender-specific behavior and role, something that has been forced upon women as a part of gender orientation.

It is evident that Indian woman has to make her way through all the socialized prejudices and we have come a lot, but yet, on the contrary, it is evident that it is still the woman who makes their most adjusting roles towards their family and the society at large. In conclusion, I would mark that women as household roles are still given the utmost consideration in the urban Indian society due to their value orientation since their childhood (Kapur, 2019) and even after broader support for equality a significant portion of urban India still believes that it is the core responsibility of a woman to rear a child, be the perfect mother and a perfect wife even in 2019 (Kwatra& Alexander, 2019).

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PSYCHOLOGICAL EFFECTS OF NATURAL DISASTERS: A DESCRIPTIVE REVIEW

Kumari Ranjeeta[1] , Swastika[1] and Dr. Md Intekhab Ur Rahman[2]
[1]Research Scholar in the University P.G. Department of Psychology,
North Campus, B.N. Mandal University, Madhepura, Bihar
[2]Professor of Psychology, P.G. Department of Psychology, North Campus,B.N.
Mandal University, Madhepura, Bihar

ABSTRACT

Disasters are stressful life situations that result in a great terror, property damage, physical harm, and often death, calamity and catastrophe are the same in meaning for these traumatic events. Natural disasters are often described as the "God made act" a term that eliminates human responsibility. These natural disasters include earthquake, flood, fire, tornado, hurricanes, pandemics etc. The natural disasters effects on people's mental and physical health, relationships, economic harms, wellbeing. It is hopeful that people have a natural mind-set that they cope with natural disasters and tried to overcome successfully from these situations but the effect of natural disasters on people's mental health may continue over a long term of time as well as they are in the high risk to develop mental health problems. This study is a review of literature of different studies regarding the effect of natural disasters on mental health. Researchers can identify variables that may shield against persists harmful pressures of collective mental and physical pain due to distressing events. The main purpose of the review was to assess the psychological status of natural disasters and investigated the affected people's mental health with different aspects of psychological health problems. In particular, this paper suggests the importance of competence planning and delivery of effective disaster mental health service.
Key Words: Disasters, Natural Disasters, mental health, psychological effects.

INTRODUCTION

Within nature, nothing is constant; indeed, nature is typified by continual changes, in some cases by predictable evolution or the normal sequence of cycling events as in seasonal weather. Much of nature, though, is unpredictable.
When unpredictable natural events become extreme in their occurrence, they may constitute a danger to humans and to the other members of an environment. Such an event, defines a natural disasters. These natural hazards may disrupt safety, property or livelihood of peoples at an unpredictable time. There are many such natural events that, when experienced in an extreme degree, may become a risk to the inhabitants of an environment.

These include avalanche, coastal erosion, drought, earthquake, flood, fog, frost, hail, landslide, lightening, heavy snow, tornado, tropical cyclone, volcano, wind and pandemics.

Disaster refers to "high-magnitude stressful life events" (Baum, 1987; Freedy et al., 1992) or "Environmental stressors that happen to a community" (Green &Soloman, 1995). The aftermath of natural disaster includes an unambiguous physical impact, resulting in property damage, injury, and death of victims. These are catastrophic occurrences with the capacity to impose various kinds of hardship, e.g. loss of property and personal possessions, enduring hunger and physical discomfort, or injury, to separation from and personal family and close friends. Devastation of social support networks as well as loss of financial income are just a few examples of the long term hardships may survivors have to experience.

People's view about benevolence and meaningfulness of the world and their own position and adjustment in the world is affected by catastrophic disasters. Victims of natural disasters experience intrusive recollection of the event hyper-vigilance, and hypersensitivity, distressing dreams, countless phobias including that of the dark and loud as well as silent and whispering noises and intense psychological stress. Traumatic events affect whole communities and create anger, frustration, dulled feelings, Anhedonia and feelings of depression within these communities (Erdur, 2002). MOHA, 2018 reported that approximately 10,000 families are affected each year due to natural disasters in Nepal. Levin (1983) describes these disruptive effects of collective trauma when people missed their customary work, hobbies and recreation, families missed visits from friends and relatives, who were afraid to come into the area. They missed the confronting sense of familiar places, their neighbor, neighborhood and acquaintances. Sociologist Kai Erikson (1994), in his writing on the human experience of modern disaster made a valuable connection between social, psychologists and anthropological approaches; he has highlighted two types of disaster trauma through his analysis of communities afflicted by collective tragedy. Which are Individual traumas: where a blow to the psyche breaks through one's defenses so suddenly and with such force, that one cannot respond effectively. Community trauma: this is a blow to social life, which in turn damages the bonds linking people together and impairs the prevailing sense of community.

There are many natural disasters happened in just 5 months of 2020, the Australian bushfire started in December 2019, Australia were facing one of its biggest natural disasters and several states called for emergency in January 2020. As per a report published in the Medical journey of Australia, this bushfire burned an estimated 18.6 million hectares, destroyed over 5,000 buildings and killed 34 peoples, while over 400 people were killed due to the residual smoke inhalation. On January 1, 2020, devastation floods destroyed Indonesia's capital, Jakarta and some neighboring areas. Several locals were victims to drowning or landslide. About 66 people lost their lives to this natural disaster.

Cyclone Amphan created havoc in west Bengal and Orissa in May 2020, leaving behind trails of destruction. The super cyclone reported killed 12 peoples in Bengal. It made

landfall in both states with abundant rains, gust windows and lightening, destroyed everything that come in its way, leaving chilling visuals all around.

While the first outbreak natural disaster of this century was identified in December 2020, in the now infamous, Wuhan, China. On March 11, 2020 the World Health Organization, (WHO) declared corona virus a pandemic and the lockdown starts on worldwide from last of the month March, 2020. As of April, 2020 the global corona virus cases surpassed one million. Today most countries are gingerly stepping out of lockdown and trying to resume life. However, 8 months into 2020, there is still no vaccine or medication for corona virus. Most of the disasters affect cities, states or occasionally regions, but not so in a pandemic. Disasters may put the victims in a state of despair and shock (Hackbarth et al., 2012). This shocked and traumatic situation brings loss for individuals, families and society. Lots of people and families faced the loss of identity by losing their work, in which they were engaged due to effects of natural disasters.

In Asia only, the 2004 Indian Ocean tsunami, the 2005 Pakistan-Kashmir earthquake, the 2008 China-Sichuan (Wenchuan) earthquake, the 2013 Typhoon Haiyan and the 2015 Nepal earthquake are mostly affected natural disasters and the victims need long term treatment.

PSYCHOLOGICAL EFFECTS OF NATURAL DISATERS

Traumatic and stressful events can trigger many kinds of psychological effects on the people, who are victims of natural disasters. The effects of disasters might have a negative impact on the mental health of the affected population as because mental health and disasters are related to each other. The affected people experienced different kinds of mental instability like Post Traumatic Stress Disorder, Anxiety, and Depression etc. According to World Health Organization (WHO, 2019) psychological distress is common in the victims, along with socio-economic distress. The psychological interventions have helped the victims to improve over time, but the most common mental disorders such as depression and anxiety are expected to increase as a result of negative impact on mental health.

Natural disasters have caused extensive losses and damages to human psychological wellbeing, economy and society. The acute psychological distress associated with lack of hope and control over one's own profession, loss of resources, social support and daily routine. Also, it is correlated with the displacement of family, death of loved one, lack of mental preparedness of disasters and negative copying skills. Peek (2008) founds various emotional, behavioural and psychological issues with fear of instabilities in adolescents and older children after natural disaster and it is form of post traumatic stress disorder (PTSD), anxiety, depression, sleep disorder and emotional distress. The natural hazards effects on behavior of adolescents and children in the form of regression diminished academic performances, aggression and self-blame (Dyregrov et al., 2018). Kristensen et al., 2012 found that a family members, who lost a loved, during the 2004 Asian tsunami, after 6 years of the event, 36% had a psychiatric disorder and the presence of prolonged grief disorder independently increased the risk for functional

impairment. Losses include loved one, family, friend, property and pets formatted grief and this traumatic grief increase the likelihood of adverse mental health.

Review of different literatures shows that the children become anxious or fearful, feeling hard on concentration and having sleeping difficulty because of disasters. The adolescents feel depressed or alone, self-harming behaviours, begins abusive substance uses. The youth reported experiencing feeling of anxiousness, restlessness and a sense of hopelessness about their future. Suspension of a regular routine, cancellation of exams, uncertainty about job placements have added to the pre-existing stress is also found about the effects of natural hazards.

Bryant et al. (2014), state it was observed during reporting on the Black Saturday Bushfires in Australia, 2009, that exposure to the bushfires were positively correlated with the high risk of post traumatic stress disorder (PTSD), depression and severe psychological distress. Fan et al. (2016) found during following the Wenchuan earthquake in 2008 that 38.3% adolescents had sleep disturbance at 12 months after the event and sleep disturbance were correlated with increased rate of depression and Post Traumatic Stress Disorder (PTSD). Home is a peaceful and safety place for human beings, but many people have to flee their home during such disasters like flood, tsunami, hurricane, volcano eruption and they need to take other temporary shelters such as camp and lodge. The environment of these shelters increased feeling of unsafe, sleep disturbance, negative emotions and diminishes the capacity of natural problem solving skills. Some other researchers also shown that other health effects include post traumatic stress disorder (PTSD), acute stress disorder (ASD), depression and at times suicide and other mental illness due to natural hazards (Adams and Boscarino, 2006; Cassidy, 2013; Gibbs, 1989; Hussain, Weisaeth and Heir, 2011b; Keskinen-Rosenqvist, et al., 2011 and Liu et al., 2016).

A recent review revealed numerous emotional outcomes, including stress, depression, irritability, insomnia, fear, confusion, anger, frustration, boredom and stigma associated with the quarantined people during the present situation of pandemic Covid-19 (Brooks et al, 2020). Betty et al. (2020) found uncertain prognoses, looming severe shortages of resources for testing and treatment, infringe personal freedom, large and growing losses contributed widespread emotional distress and increased risk for psychiatric illness associated with Covid-19 pandemic. The review of the articles explained that natural disasters have a potential negative impact on mental health, with increasing level of Post Traumatic Stress Disorder (PTSD), depression, anxiety and use of psychotropic medications (McCabe et al., 2014 and Malkina-Pykh and Pykh, 2013).

People directly impacted by natural disasters, they may witness devastating among their families, friends and great community and it may create feeling of strong grief, panic and sadness. There are so many psychiatric conditions caused by natural disasters such as anxiety disorders, depression, insomnia, adjustment disorders, suicidal thoughts and behavior, substance use disorders, psychotic disorders due to medical conditions. Consistency of fear and worry about of own self and the loved ones, consistent anxiety of strained financial situation or loss of support services one's rely on, worsening of

chronic physical and mental health conditions are the stressful outcomes due to effect of disaster.

CONCLUSION AND SUGGESTIONS

Natural disasters negatively impact on the physical and mental health of peoples worldwide. Although we found about the various forms of psychological effects of natural disasters through different researches that victims are suffering during and after the event, it is important that education and trainings for healthcare personnel and disaster managers continue to evolve beyond contemporary approaches of diagnosing and treating illness. Early screening, delivery of public health interventions on evidence based, cost effective, accessible and sufferers-focused with the goal to recovering the effects of disaster like reducing psychological distress and disorders, providing day-to-day needs and enhancing well being.

The teachers, parents and other school personnel can help more effectively to identify distress reactions, reduced aggression and provide educational support resources for the youth and children.

Media and social media can also help for disaster affected areas and communities through providing information about the risk of disaster, recommended health personnel and informing about how to access available resources to get help and reduce fear as well as rumours. Community leaders, healthcare supporters and NGO's workers also helpful to work collaboratively to ensure accurate information is conveyed and provide the necessary needs of sufferers.

The most addition treatment trauma-focused psychotherapies will provided to the disaster victims such as Cognitive Processing Therapy (CPT), Cognitive Behavioral Therapy (CBT) and Prolonged Exposure Therapy (PET) is benefitted in the treatment of trauma and Post Traumatic Stress Disorder (PTSD). Counseling, life skills trainings, yoga, meditation and relaxation therapy is the way to enhance the mental health and psychological wellbeing. Prevention of psychological consequences of natural disaster holds great promises, but it is untried and untested. It is advocated for a stepped-care approach for those moving sufferers, whose distress is unabated into psychological and psychiatric treatment through a progression of early to intermediate psychological support.

The present research paper focused on the awareness of the need for the incorporation psychological preparedness in disaster preparedness policy, trainings and interventions by government, organizations and concerned authorities, so, that they can better prepare mentally for a situation during or after a disaster. Psychological preparedness enables to successfully manage disaster warning situation with disaster impact and reduce the resulting psychological distress. On the hand, social, instrumental and emotional supports will be provided for the help to reduce the rate of several mental health issues and traumatic experiences. The strong social support will beneficial from those people, who are equipped with knowledge and skills on how to manage and prevent from distress, depression, mental illness and post traumatic stress (PTSD) as well as other

problems relating to the effects of natural disasters. In addition to it, it is highly recommended that a mental hospital and counselingcenters must be established by the government in the disaster affected areas and NGOs should take initiative into the mitigation of the related psychological problems in context to the effects of natural disasters. There is also a need to expand the research focus in the field of effect and supportive resources during and after natural disasters.

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CURRENT STATUS OF NON FORMAL PRESCHOOL EDUCATION IN ICDS: A REVIEW OF RESEARCHES

Monica Jairam and Geeta Chopra

Abstract

Integrated Child Development Scheme (ICDS) currently runs seven thousand seventy six projects in India, benefiting children between ages of 3 to 6 years every year through non formal preschool education. Relevance of providing children the facility of preschool education is to help them grow holistically and laying sound foundation for formal learning. Moreover, children during these years are more receptive towards learning with rapid brain development. Quality in preschool education affixes their learning capacities through learning opportunities. However, ASER' 2019 reports alarmingly poor outcomes for age 5 children attending Anganwadi centres on their performances at cognitive, early language and early numeracy tasks.

Therefore, an attempt is made to study current status of non formal preschool education component being provided at Anganwadi centres through ICDS. For the purpose of study, 21 published articles were reviewed on aspects of Anganwadi centres that are: physical infrastructure, non formal preschool activities and availability of learning materials at centres.

Results indicate lack of physical infrastructure in form of rented buildings, insufficient electricity, sitting arrangements. Some centres conducted non formal preschool activities with domain specific or indoor/outdoor activity, while others still not doing any. Availability of learning materials in form of stationery, print material and manipulative materials was there. However, appropriate utilization or sufficiency of material seemed to be a challenge.

Keywords: Integrated child development scheme (ICDS), Anganwadi centres, non formal preschool education, learning material .

Introduction

Integrated Child Development Scheme launched with 33 projects on experimental basis to offer service packages for children of age group 0-6 years, is currently expanded to 7076 projects in India. In the year 2017 to 2018, seventy one million nine hundred forty one thousand seven hundred seventeen, children between age of 6 months to 6 years were found to be beneficiaries of Anganwadi centres all over India. The scheme offers six services that are supplementary nutrition, preschool non formal education, nutrition & health education, immunization, health check up and referral services to children, pregnant women and lactating mothers. Its aim is to improve nutritional and health status of children in age group of 0-6 years; lay foundation for proper psychological, physical and social development of the child; reduce incidence of mortality, morbidity,

malnutrition and school dropout; achieve effective co-ordination of policy and implementation amongst various departments to promote child development; and to enhance capability of mothers to look after normal health and nutritional needs of children through proper nutrition and health education.

Indian Early Childhood Education Impact study – 1, a flagship study surveyed participation trends in 69 villages and six urban sites of three states that are Andhra Pradesh, Assam and Rajasthan, covering 2,767 children between ages of 3.5 to 4.5 years. 83% of sampled children were found to be attending some form of early childhood education programme, out of which 45% were found to be attending Anganwadi centres and 43% attending private preschools. Hence, Anganwadi centres were being attended equally as private preschools.

In some cases, there was unavailability of private preschools in districts, leaving no other option than sending children to Anganwadi centres (Kaul, Chaudhary & Sharma, 2014).

The purpose of preschool education is to impart concepts of shapes, sizes, numbers, space and relationships. This helps the child to grow holistically that is physically, cognitively, emotionally, all this happens while the child gains language and communication skills. Preschools provide children with opportunities to learn and lay foundation for formal learning. It helps children to make up for deprived stimulation, specifically for children coming from homes where stimulation is deficient. Children attending quality preschools show both short term and long term benefits. They perform better on cognitive and socio - emotional skills. Quality preschool education enriches linguistic abilities and reduces economic disadvantages (Norwegian Ministry of Education and Research, 2016).

An ASER'2019 "Early Years" study was conducted in 26 districts across 24 states of India covering 36,930 children between age group of 4 to 8 years to assess children on social and emotional development by performing tasks on cognitive, early language and early numeracy. Generally, children at age 5 perform better on these domains than children of age 4. However, study stated that large portion of sampled children of age 5 could not perform tasks on these domains. In which, 44.2% of 4 years old and 26.3% of 5 years old of sampled children were enrolled in Anganwadi centres and had lower level of cognitive and foundational ability than their counterpart in private schools (ASER, 2019).

Anganwadi centres form major part of preschool education system in India but are failing to help children to meet their developmental goals. Consequently, this calls for a need to recognize current status of Anganwadi centres with respect to non formal preschool education component and the types of facilities being provided to children.

Research Questions:
On the basis of provided facts and figures following are the research questions-
1. What is the overall status of preschool education in Anganwadi centres of the ICDS programme?
2. What kind of infrastructural facilities are available to children at Anganwadi centres?
3.   What type of preschool activities is being conducted in Anganwadi centres for children?

4. Do Anganwadi centres have early learning material available for children?

These questions lead to following objectives of the study**.**

Broad objective:
1. To investigate current status of non formal preschool education being provided at "Anganwadi" centres through Integrated Child Development Service Scheme (ICDS) of India.

Specific objective:
1. To explore the status of physical infrastructure available at "Anganwadi" centres.
2. To study the non formal preschool activities being conducted at "Anganwadi" centres with children.
3. To identify the availability of learning materials for children in "Anganwadi" centres.

Methodology

For the purpose of current study, published articles on Intergrated Child Development Services Scheme (ICDS) were searched. Articles were searched from online databases like Google Scholar, Proquest, Shodhganga, Wiley Online Library, J STOR, PsycARTICLE, PsycINFO, Taylor and Francis, Early Childhood Education Journals, Research Gate and NCERT online publications. The keywords used while searching articles were Anganwadi centres, non formal preschool education in ICDS, current status of ICDS, early childhood education in ICDS, teaching learning material in ICDS. A total of 53 published articles were collected and scanning of abstract, methodology and results of each document was done. On the basis of following exclusion and inclusion criteria 21 articles were finalised for reviewing.

Inclusion criteria:
1. Only published articles were included.
2. They should provide information on three components of Anganwadi centres that are physical infrastructure, preschool activities and learning materials.
3. Articles published between year 2008 to 2018 were included.

Exclusion criteria:
1. Articles not following above criteria were all excluded.

The included 21 studies were subjected to in depth reviewing of articles. On the basis of results presented by published articles, they were grouped in three categories, each category with 7 articles that are:-
1. Articles giving information on physical infrastructure
2. Articles giving information on non formal preschool activities
3. Articles giving information on learning materials at Anganwadi centres (AWCs).

Extraction of data: A separate excel sheet was formed for each of three categories. Information with respect to physical infrastructure, non formal preschool activities and

learning materials was put in each of sheets. Later these, information were subjected to compilation under each category separately.

Results and Findings

Reviewing of articles lead to provide current status of Anganwadi centres from 16 states of India that are: Delhi, Punjab, Uttar Pradesh, Haryana, Himachal Pradesh, West Bengal, Andhra Pradesh, Gujarat, Jammu & Kashmir, Tamil Nadu, Kerala, Odisha, Madhya Pradesh, Manipur, Rajasthan and Jharkhand.

Status of physical infrastructure of "*Anganwadi*" centres

Reviewing seven published articles, provided insights of 684 "Anganwadi" centres from the state of Delhi, Punjab, Uttar Pradesh, Haryana, Himachal Pradesh, West Bengal, Andhra Pradesh and Gujarat. Studies reported constrain in building spaces. These constraints includedpoor availability of indoor or outdoor space at the AWCs, AWCs being housed in rented buildings, using classroom as kitchen space or using panchayat/ worshiping buildings that is "gurudwara"/ "mandir" as "Anganwadi" centres. Gill et al. (2017) stated 35.7 percent out of four hundred "*Anganwadi*" centres at Amritsar in Punjab were running at "*gurudwara/ panchayat ghars*". Anganwadi centres were reported to be using natural light as source of lighting in classrooms stating lack of electricity. Among the forty one "*Anganwadi*" centers of Northeast region of Delhi studied, 14.6 percent did not have electric light and were using natural light (**Malik, Bhilwar, Rustagi, & Taneja, 2015**). Sembiah et al. (2017) conducted a cross sectional study on 23 AWCs in Kolkata, in which it was repoterted that 39% had their own buildings and 21% operated in school premises. 34.8% of centres had improper ventilation and 39.1% had inadequate lighting facility. 84.2% Anganwadi centres had space constraint which made environment unhealthy, disease prone and problematic to sit. Chudasama et al. (2014) studied 60 Anganwadi centers from 12 districts of Gujarat which were Ahmedabad, Amreli, Bhavnagar, Jamnagar, Junagadh, Kutch, Mehsana, Patan, Porbandar, Rajkot and Surendranagar. 73.3 % of centers had concrete buildings. 53.3% had adequate indoor space and 46.7% had inadequate indoor space. 31.7% of centers did not have separate space for kitchen sothey were conducting kitchen working within the classroom area. This made children distracted and uncomfortable and the centres becamesmoky due to cooking. 30% of centers did not have child friendly toilets. Children were given rug/carpet/mat for sitting purpose while at some AWCs,children were sitting on the bare floor. To illustrate, out of forty three "*Anganwadi*" centres in district of Birbhum, West Bengal half of centres had mats or chairs to sit, while half of children sat on floor (National Institute of Public Cooperation and Child Development, 2009). Some centres had child friendly toilet facility while others did not have child friendly toilets and majority of them didn't have toilet facility in any form for children. For an instance, Helena et al. (2014) in cross sectional study of forty five "*Anganwadi*" of Vishakhapatnam, Andhra Pradesh found that not every centre had toilet and drinking water facility.

Non formal preschool activities at "*Anganwadi*" centres

Results from seven studies collectively could report on 170 Anganwadi centres from the states of Jammu & Kashmir, Punjab, Tamil Nadu, Kerala, West Bengal and Odisha. Out of seven studies, only one study reported that Anganwadi workers were not conducting activities, rest all were involved in some form of activities with children. As stated by Kular, (2015) by studying 120 children from 20 Anganwadi centers from Barnala district of Punjab that not a single child could count number. Here, the Anganwadi workers were reported to be not sincere about conducting activities with children, hence children scored low in learning assessments.

Other centres reported conducting activities in both indoor and outdoor. Some indoor activities were free conversations; storytelling; poems; paper activities; role play; puppets; building blocks; science activities; activities for physical development; activities for cognitive development; creative activities; songs/riddles/quiz picture reading; describing objects; naming and identification. Outdoor activities involved nature walks; water activities and games. These centres found to be conducting either all activities or some of these activities with children. Qadiri & Manhas, (2009) studied sixty centres of Kashmir and in most of the centres, children were engaged in group activities and little attention was given on solitary activities. Further in conversation with Anganwadi workers the purpose was to make children more social through group activities. These activities helped children to learn to share, develop good vocabulary and overcome hesitations. Fifty percent of centres conducted sorting/matching objects, 11.6 % conducted counting and seriation, thirty percent did only counting activities. 53.3% performed activities related to fine motor skills and matching objects activities.

Anganwadi workers used play way method for conducting activities and mother tongue as medium of instructions. Most of the centres reported to be following a routine. Dhingra & Sharma, (2011) studied sixty centres at Jammu and Kashmir and found that Anganwadi workers taught children by play way method and Hindi language was used as medium of instructions in daily routine. C.K, (2014) studied Anganwadi centers of Thrissur District of Kerala. It was reported that Anganwadi workers spent sufficient time for preschool activities. A positive impact was found on children attending these Anganwadi centers. A total of 30 children were assessed out of which 26% children could speak in simple sentences. 96% children were able to count numbers. 85% children could write alphabets/words and differentiate between various colours. Results showed that teaching was done through variety of creative games. Purpose of these games was found to enhance various domains/skills like language, recognition and categorization. Samanta et al. (2017) studied 30 Anganwadi centers of Bankura Municipality, West Bengal and found that not a single center was following a planned schedule. Also the activities were not age appropriate. Observations conducted in these studies revealed that majority of centers performed conversation, storytelling, reading, writing, free play as preschool activities.

Dash, (2012) interacted and observed 100 Anganwadi workers, 24 supervisors and 4 Child Development Project Officers in Balasore district of Odisha. Major findings of the study were that centers opened at 7 A.M to 11 A.M. The day used start by welcoming students, followed by prayer, conversation with children, songs with actions, activities for physical development, activities for cognitive development, creative activities, storytelling, songs/riddles/quiz and last is see off.

Availability of learning materials in "*Anganwadi*" centres
Status of learning materials has been extracted from published studies from the states of Madhya Pradesh, Manipur, Kashmir, Rajasthan, Jharkhand, Jammu and Kashmir. Availability of learning materials in Anganwadi centres can be categorized under three heads that are as follows:-

1. Stationary materials: Blackboards, flannel boards, whiteboards, coloured chalks, scissors, paper, sketch pens, pens and pencils.
2. Print material: Charts, maps, posters, photographs, picture books, alphabet cards, flash cards, story books and vocabulary cards.
3. Manipulative materials: Seeds, pebbles, soft pea, coloured wooden balls, wooden cubes, cylinder, coloured wooden squares, building blocks, beads, buttons, abacus, toys, counting frames, magnetic alphas, and handmade materials.

Khamrang, (2014) found that, in 622 "*Anganwadi*" centres of Ukhrul district in Manipur, materials were available for specific domains i.e physical development and language development in form of clay, tyre, balls, rings, rope for tug of war, local games like Saotheila*, story books, puppets and vocabulary cards. Scissors, paper, sketch, pen, pencil and waste materials, like bottles, shells, matchboxes, tea packets were available for creative development. Materials like soft toy and musical instruments were low in percentage.

Few studies reported to have preschool kits available in centres for instance; K.M et al., (2014) studied 139 Anganwadi centers out of which only 89 were functional in North, South and Central zones of Kashmir valley. Out of these 89 centers, 66 (74.2%) centers had preschool education kit available at centres. Thomas, Sengupta & Benjamin (2015) assessed 9 Anganwadi centers in urban area of Ludhiana, Punjab. There were charts and preschool education material like slate and books. However, they were not being used in center. Children were kept engaged in toys as no preschool activities were conducted in center.

Acharya, (2017) studied 5 Anganwadi and 5 NGO based centers of Rajasthan and West Bengal. It was found that 48% of Anganwadi centers had teaching learning materials like toys, counting frames, preschool education kits, story books and handmade materials. While in West Bengal only 25% had teaching learning materials. Ahad, Mudasir & Yatu (2014) studied 20 Anganwadi centers of Zaldagar of Srinagar district in Jammu and Kashmir. It was found that 12 centers had play equipments available. The study concluded that required teaching-learning materials were not sufficiently available in any centres. In some centres though learning material was available, however, they it was not being used by teachers for conducting activities.

Discussion and Conclusion:
Current review article did an analysis of 21 published researches on current status of non formal preschool education component of Integrated Child Development Services in India. The articles were carefully reviewed and findings were compiled under three categories which were status of physical infrastructure of "*Anganwadi*" centres; non formal preschool activities at "*Anganwadi*" centres and availability of learning materials in "*Anganwadi*" centres.

Anganwadi centres were found be struggling with building spaces as most of them were either on rent or were running in panchayat ghar/religious spaces. Centres were conducting kitchen work within classroom area. Children were made to sit on mats/rug or in some cases on bare floor. Turunen et al., 2014 stated that physical building design and construction impact child's learning and behaviour. North America and Western Europe had studied a direct relation between physical environment and children's cognitive and socio emotional development (Freguson, Cassells, MacAllister, & Evans, 2013). Hence, this review tries to point out poor infrastructure as a drawback in the AWC spaces.

The research studies which were reviewed found that the centres conducted both indoor and outdoor activities in form of free conversations; storytelling; poems; paper activities; role play; puppets; building blocks; science activities; activities for physical development; activities for cognitive development; creative activities; songs/riddles/quiz picture reading; describing objects; naming and identification; nature walks; water activities and games. However, not a single centre was found to be carrying out all the activities but was conducting either one or few of them. Few centres were not carrying out any activities.

Centres had stationery materials like blackboards, flannel boards, whiteboards, coloured chalks, scissors, paper, sketch pens, pens and pencils. Print materials that are charts, maps, posters, photographs, picture books, alphabet cards, flash cards, story books and vocabulary cards were available. Manipulative materials like seeds, pebbles, soft pea, coloured wooden balls, wooden cubes, cylinder, coloured wooden squares, building blocks, beads, buttons, abacus, toys, counting frames, magnetic alphas, and handmade materials were available. Availability of material was there however, they were found not being used by centres. Gogoi, (2015) stated that materials available makes exploration and interaction with environment better. Utilization of materials in an appropriate way enhances learning, which was not found to be happening in some centres.

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MSMES TRAININGS – KICKS OFF GDP GROWTH, MSMEEXPORTSORNUGATORY EXPENDITURE

[1]Mr.Mervin Felix Caleb and [2]Mr. Akshay
[1]Assistant Professor,Department of Management Studies
AFMIMIT College of Engineering, Mysore, Karnataka
[2]Management Trainee,Management Trainee, Mysore, Karnataka

Abstract :

Training is known for bringing exemplar metamorphosis from the earlier context to the expected one. The integral contemplation of training is between the expenditure and effectiveness, in terms of reaching the training objectives . the very success of any training is likely dependent on the outcome.

The Ministry of Micro, Small and Medium Enterprises (M/o MSME) promotes the development of micro and small enterprises in the country with the objective of creating self-employment opportunities and upgrading the relevant skills of existing and potential entrepreneurs.

Training has been an antidote for the macro problems of MSMEs, while resolving the economical hurdles of the nation. That being so, training imparted on the entrepreneurs has received a remarkable participation over time, exports or the GDP has faced a downturn despite these trainings, on the contrary.

Keywords: Economic Growth, GDP, MSME Training, MSME and Share of MSMEs on GDP

Introduction:

The Micro, Small and Medium Enterprises (MSMEs) sector has emerged as a highly vibrant
and dynamic sector of the Indian economy. MSMEs not only play crucial role in providing
large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional
imbalances, assuring more equitable distribution of national income and wealth. MSMEs are complementary to large industries as ancillary units and contribute enormously to the socioeconomic development of the country.

Entrepreneurship development is one of the key elements for promotion of micro and small enterprises, particularly, the first generation entrepreneurs. Entrepreneurship, and resultant creation of employment and wealth, is a major means for inclusive

development. Hence, entrepreneurship development has been one of the priorities in countries the world over.

In order to ensure that young entrepreneurs are encouraged and suitably equipped to go into new ventures, the Ministry has set up a National level Entrepreneurship Development
Institutes namely, National Institute for Micro, Small and Medium Enterprises (NI-MSME),
Hyderabad to undertake the task of entrepreneurship and skill development training on a regular basis.

The Ministry has also been supporting the efforts of State Governments/Union Territories,
Industry Associations, Financial Institutions, Technical/Management Institutions, other Non-Government Organizations (NGOs), etc. for establishment of new training institutions
as well as strengthening of the infrastructure of existing training institutions.

In order to accelerate and promote entrepreneurship by providing support for strengthening of training infrastructure as well as training programmes, the Ministry has been implementing an important scheme viz. "Assistance to Training Institutions (ATI)". The main objectives of the scheme are development of indigenous entrepreneurship from all walks of life for developing new micro and small enterprises, enlarging the entrepreneurial base and encouraging self-employment in rural as well as urban areas, by providing training to first generation entrepreneurs and assisting them in setting up of entrepreneurs.

The M/o MSME is having two Divisions called Small & Medium Enterprises (SME) Wing and Agro& Rural Industry (ARI) Wing. The SME Wing is allocated the work, inter-alia, of administration, vigilance and administrative supervision of the National Small Industries Corporation (NSIC) Ltd., a public sector enterprise and NIMESE the one autonomous national level entrepreneurship development/training organisations.

The implementation of policies and various programmes/ schemes for providing infrastructure and support services to MSMEs is undertaken through its attached office, namely the Office of the Development Commissioner {O/o DC (MSME)}, National Small Industries Corporation (NSIC), Khadi and Village Industries Commission (KVIC), the Coir Board, and one training institutes viz., National Institute for Micro, Small and Medium Enterprises (NI-MSME); Hyderabad and Mahatma Gandhi Institute for Rural Industrialization (MGIRI), Wardha a society registered under Societies Registration Act, 1860.

➤ To support sustainability and growth of MSEs by addressing common issues such as improvement of technology, skills and quality, market access, access to capital, etc.

➢ To build capacity of MSEs for common supportive action through formation of self help groups, consortia, upgradation of associations, etc.
➢ To create/upgrade infrastructural facilities in the new/existing industrial areas/ clusters of MSEs.
➢ To set up common facility centres (for testing, training centre, raw material depot, effluent treatment, complementing production processes, etc).

NATIONAL INSTITUTE FOR MICRO, SMALL AND MEDIUM ENTERPRISES (NIMSME)

Entrepreneurship development and training is one of the key elements for the promotion of micro, small and medium enterprises (MSMEs), especially for creation of new enterprises by the first generation entrepreneurs. In order to inculcate the entrepreneurial culture amongst the first generation of entrepreneurs on a regular basis, the Ministry has set up National Institute for Micro, Small and Medium Enterprises (NI-MSME) (1960) at Hyderabad, as an autonomous society. This institute is engaged in developing training modules; undertaking research & training; and providing consultancy services for entrepreneurship development & promotion of MSMEs, including enhancement of their competitiveness.

MSME-DIs are conducting entrepreneurship development training programmes for first generation potential entrepreneurs, The ultimate aim is to promote the MSME sector of the country by inculcating entrepreneurial culture in the respective area as well as to enhance productivity of the existing industries of that State/Area. It also provides various common facilities to existing industries of the area and helps them in improving the techno-managerial skills.

(i) Industrial Motivation Campaigns (IMCs): Industrial Motivation Campaign, of one day duration, are organized to identify and motivate traditional /non-traditional entrepreneurs having potential for setting up Micro or Small Enterprises so as to lead them towards self employment. Emphasis is being given to organize the maximum number of programmes in rural/remote areas particularly for weaker sections of the society. There is a target of 880 IMCs for the current year wherein 35,000 persons are likely to participate.

(ii) Entrepreneurship Development Programmes (EDPs): Entrepreneurship Development Programmes are being organized as a regular training activity to cultivate the latent qualities of youth by enlightening them on various aspects that are necessary to be considered while setting up Micro, Small & Medium Enterprises. These programmes are conducted generally for technicians /artisans for motivating them towards self-employment. The course contents of such Entrepreneurship Development Programmes are so designed as to provide useful information on product /process design, manufacturing practices involved, testing and quality control, selection and usage of appropriate machinery and equipments, project profile preparation, marketing avenues/techniques, product / service pricing, export opportunities, infrastructure facilities available, finance and financial institutions, cash flow, etc. No participation fee is charged from SCs/STs. Only 50% fee is charged from Women and Physically

handicapped participants. A stipend of ` 125 /- per week per candidate is provided to a person belonging to SC/ST, women or physically handicapped categories in the stipendiary programmes. Emphasis is being made to organize special programmes in rural areas particularly for weaker sections of the society. This year target for EDPs is 878 programmes. 17560 persons are to be trained in these EDPs.

Enterprise promotion and entrepreneurship development being the central focus of ni-msme's functions, the Institute's competencies converge on the following aspects:-
(i) Enabling enterprise creation;
(ii) Capacity building for enterprise growth and sustainability;
(iii) Creation, development and dissemination of enterprise knowledge;
(iv) Diagnostic and development studies for policy formulation; and
(v) Empowering the under-privileged through enterprise creation.[1]

Literature Review :

Schumpeter[2] (1967) enunciates that innovation is the essence of entrepreneurship. He discusses entrepreneurship in a broader perspective. He 35 proposes that entrepreneurial innovation consisted not only in creating/finding new markets, new supply sources and new type of industry organization. He considers economic development as a change brought by entrepreneurs by instituting new combinations of production, i.e., innovation

Vetrivel, Iyyampillai and RadhaKrishnan[3] (2010) examine the role of SSIs in Tamil Nadu, in the eradication of poverty. The study shows that the Tamil Nadu Government is supporting the entrepreneurs to start new SSI units by providing financial assistance and training programmes through the industrial Promotional Agencies (IPAs) at State level with a view to generating employment 42 opportunities which would result in eradicating poverty.. The study reveals that the industrial field is now looking for people with formal and specific educational qualification and professional expertise.

Karthihaiselvi, Neelamegam and Magesan[4] (2010) have examined the significance of small -scale Industries in India. The study shows that over the last 10 years, the share of SSI exports has increased in most of the sectors. The study also recognizes that India is endowed with adequate natural resources. So it is a conducive time for the growth of small scale-industries. The government must rise to the occasion, by providing loan facilities and proper training to the entrepreneurs.

Levenburg and Schwarz [5] (2008) examines the impact of culture, education and environment upon entrepreneurship in India. Their conclusion is that among the environmental factors, education and entrepreneurial training are highly influential in the entrepreneurial activities of our country.

Sani [6] (1996) affirmed that trained entrepreneurs have better entrepreneurial vision than the untrained. It was observed that the trained are more ambitious and less frustrated.

The study also testified to the fact that the trained entrepreneurs excelled in the dual functions, of production and marketing.

Borbora[7] (2009) recalls that entrepreneurs are not born……..they "become" what they are through the experience of their lives. Entrepreneurial ability can be improved through appropriate management education, and skill development and training. The study maintains that improved skill development invariably leads to better business performance in some SMEs. Therefore, there should be a closer link between skill development agencies and business organizations.

Mathew [8] (2009) made an elaborate study on the new perspectives in human resource development in the SMEs. He maintains that as a growing economy with highly diversified SME sector, India requires innovative solutions to its human resources for entrepreneurship. Unlike other countries, in India, the training modules are decided as per convenience and not as per requirement. The study demands that there should be an integrated policy on capacity building not only for expanding its entrepreneurial base, but also to ensure that such entrepreneurial resources truly reflect the needs of a growing economy.

Nagesh and Murthy [9] (2008), in their paper on the effectiveness of women entrepreneurship, point out that women entrepreneurship training programs are generally effective in developing various entrepreneurial skills such as new job awareness, knowledge of marketing skills and other similar accomplishments. The results of the study reveal that the State and Central Government training centres and nodal centres which impart training to the entrepreneurs have been successful in catering to the needs of the majority of the recipients. About one-third of the respondents felt less or no effectiveness of the training program and demanded steps for improvement.

Objectives of MSME

The Micro, Small & Medium Enterprises - Development Organisation is regularly carrying out the Human Resource Development activities for its officers and staff since its inception. The organisation is imparting induction as well as in-service training through various renowned training institutions. The main objectives of this scheme are:

1. To aware with the latest technologies and tools available globally.
2. To upgrade with latest management practices, administrative rules and procedures in use.
3. To make them more competitive by using latest quality control and testing facilities.
4. To train them in making more use of Information technology in day to day work.[10]

Concepts of term loans, various methods/instruments for raising term loans, concept of working capital, operating cycle, ratio analysis, eligibility calculation, methods and instruments to raise working capital, rating methodology, equity funds, types and methodology to raise these funds with valuation techniques, documentation and preparation of information memorandum, and preparation of bankable project would also be taught.

For self-employment :

The training programme would provide a great opportunity for self-employment, as well as jobs in MSMEs, MNCs, private limited companies and corporates as technician and adviser. [11]

Objectives of the study
This article is based on the delineated objectives:

i.   To analyze the influence of training on entrepreneurs.
ii.   To compare the effects of training entrepreneurs with the MSMEs contribution to GDP
iii.   To analyze the effectiveness of training in entrepreneurs participation.

Analysis :
The core objective of setting up training programme is to contribute towards exports and the GDP, optimistically accentuating economic growth. Consequently increased investment, production by MSME entrepreneurs leads to employment generation , contributing to the GDP growth at a macro level.

Training is one of the factor amongst other factors, which causes economic growth. M/o MSME initiative of undertaking training programmes has urged entrepreneurs to participate in the training programs, subsequently 'Knowledge Dissemination' has been successful, according to the MSME Annual Reports. In a bid to reduce inconvenience in gathering information 'one point information arena/portal' is formed for the benefits of the entrepreneurs.

Annual reports suggest the success of the training/ awareness programmes with commendable participation by the entrepreneurs at the state level and at all levels of training.

Annually, MSMEs have witnessed increased entrepreneurs participation necessitating more and more training programmes, but the contribution towards the GDP growth isn't found very satisfactory, yet it has to be mulled over on.

Table 3 :Yearwise MSME Programmes and The Total Number of Participants [12]

Year	Programmes	Participants /Trainees
2006-2007	255	7235
2007-2008	215	5588
2008-2009	277	8878
2009-2010	305	11565
2010-2011	756	21912
2011-2012	772	25079
2012-2013	1384	46621
2013-2014	1354	43287
2014-15	2171	72690
2015-16	2021	61888
2016-17	1136	40292
2017-18	858	27960

The table denotes gradual increase in the number of training programmes organized from 2006-07 to 2012-13 and the year 2010-11 faced an exponential step-up in the number of training programmes and the number of participants, resulting in further surge in the number of training programmes till 2012-13, later from 2013-14, the number of training programmes and the number of participants, contiguously has reduced drastically.

The training programmes conducted from 2006-07 proved effective with the growing participation from the entrepreneurs. Thus, MSME Training units deserves an applause on this aspect.

Table 4 : Contribution Of Manufacturing Output Of MSME In GDP
(at 2004-05 prices) [11]

Year	Gross Value of Output of MSME Manufacturing Sector (Rs in crore)	Share of MSME sector in total GDP (%)			Share of MSME Manufacturing output in total Manufacturing Output (%)
		Manufacturing Sector MSME	Services Sector MSME	Total	
2006-07	1198818	7.73	27.40	35.13	42.02
2007-08	1322777	7.81	27.60	35.41	41.98
2008-09	1375589	7.52	28.60	36.12	40.79
2009-10	1488352	7.45	28.60	36.05	39.63
2010-11	1653622	7.39	29.30	36.69	38.50
2011-12	1788584	7.27	30.70	37.97	37.47
2012-13	1809976	7.04	30.50	37.54	37.33

The above table 4 denotes, the growing Gross Value of Output of MSME Manufacturing Sector gradually over the years. Noticeable surging effects aren't viewed in the share of MSME sector contributing on Total GDP. There has been increase from 35.13% to 37.54%.

Table 5: Contribution of MSMEs in Country's Economy at Current Price [12]

(Figures in Rs. Crores adjusted for FISIM3 at current prices)						
Year	MSME GVA	Growth (%)	Total GVA	Share of MSME in GVA (%)	Total GDP	Share of MSME in GDP (in %)
2011-12	2622574	-	8106946	32.35	8736329	30.00
2012-13	3020528	15.17	9202692	32.82	9944013	30.40
2013-14	3389922	12.23	10363153	32.71	11233522	30.20
2014-15	3704956	9.29	11504279	32.21	12467959	29.70
2015-16	4025595	8.65	12566646	32.03	13764037	29.20
2016-17	4405753	9.44	13841591	31.83	15253714	28.90

Table 5 denotes, the share of MSME in GDP rose from 30.00% in the year 2011-12 to 30.40% in the year 2012-13, later on, 2013-14 reported a fall in GDP to 30.20, further decline to 28.90% in the year 2016-17.

Nevertheless, Union Minister for MSME Nitin Gadkari said that his vision is to increase MSMEs contribution to India's GDP to over 50% from the current 29% and that for the Indian economy to scale the $5 trillion mark, the cooperation of the MSME sector will be crucial.

Exports' contribution which currently stands at 50% from the sector will be increased to 75% while employment generation will extend to 15 crore people from the MSME segment as against 11.10 crore at present. "We have to think big. It .." [13]

Table 3 delineates the training trend only on two variables, i.e., programmes conducted and the number of participants , excluding the end result – effectiveness of training on MSME contribution on GDP. Notably stated by experts, any training begins with the training need and to ends with the evaluation of training.

The above table shows the number of programmes organized by the Ministry of MSMEs has gradually inclined from 255 programmes in the financial year 2006-2007 to 2171 programmes in the financial year 2015-16, but took a downturn from the year 2016-17 with 1136 programmes to 858 programmes in the financially year 2017-18.

As well, the number of pariticpants has gradually increased from 7235 participants in the financial year 2006-07 to 72690 participants in the year financial year 2014-15. Decline in the participants was noticed from 61888 participants in the financial year 2015-16 to 27960 in the financial year 2017-18.

Lots of entrepreneurs have been benefitted from the training imparted by M/o MSME from 2006-2017-18, resulting in the increase of new entrepreneurs or strengthening the existing entrepreneurs, but the contributions in the share of MSME in GDP was satisfactorily contributed till 2013-14 and from the year 2014-15 the GDP has witnessed fall in the share of MSME contribution in GDP. A proper survey on these participants is integral to understand the reasons behind the downfall of GDP

Despite training imparted on the entrepreneurs towards economic growth, participants acts as best source to identify their other problems and the reasons behind the fall in GDP. This crucial information serves as a deciding factor for M/o MSMEs in planning training programmes for the consecutive years.

The benefits conferred by MSME has not only encouraged start-ups but also saved many sick MSMEs from dooming, eventually resurging step by step.

Limitations of the study :

The paper stays on the data accessibility on digital portal in the form of annual reports and considerations of two variable,i.e., training and GDP, distinguished for the study among the other GDP influencing variables. This study is limited to the these variables.

Conclusion :

The policy makers have been contributing for the progress of the nation over the years. Training effectiveness is depicted in economic growth, increasing GDP stays one of the vital objectives of training.

MSME annual reports presents both training and GDP figures, alongside the share of MSME on exports, GDP, Manufacturing output,etc. The last five years hasn't been satisfactory agreeable as far as the expected outcomes is concerned, in terms of GDP and other parameters . Training and GDP aspects were the two parameters used in this study to understand the impact of training on the GDP. MSMEs incurs crores of expenditure on training and the contribution of MSMEs made on GDP is the extension this paper provides for further research.

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AN ANALYTICAL STUDY ON THE IMPACT OF SUSTAINABLE FASHION ON ECONOMIC DEVELOPMENT

N. Vani
Asst prof ,Amity Global Business School , Hyderabad

Abstract :

Sustainable fashion is only one of the many factors which are trying to save the ecosystem, with not damaging the economy in the process. This study focuses into understanding the ill-effects of fast fashion on the ecosystem, and the driving forces behind the need for sustainability in fashion. It also tries to understand the impacts of sustainable fashion on the economy and the awareness of sustainable fashion among the respondents.

Key Words : Fast Fashion, Recycled Clothing, Sustainable Fashion.

I.   Introduction

Sustainable fashion is both a part of the philosophy of design and a strongly growing trend in the path of sustainability. Its goal is to create a system that can be supported indefinitely, both in terms of environmental impact and social responsibility.
We know that most of the fashion production on the market is made up of cotton and polyester. Cotton is a natural textile fibre that needs large water resources for plant growth and a disproportionate amount of chemicals such as fertilizers and pesticides. Polyester is a synthetic textile fiber that has far exceeded the use of natural fabrics, a rapid evolution due to very low production and sales costs of the final product. Several synthetic fabrics derived from petroleum are used and their production is still very harmful for the environment
The idea behind sustainable fashion is the continuous search for new materials that are ecological and renewable, in other words, not harmful to the environment and that require the minimum waste of natural resources. By replacing toxic substances with more ecological alternatives we can avoid dangerous chemicals that persist in the fabrics and are absorbed by our body, but also released into the water each time the clothes are washed.
The alternatives to harmful synthetic fabrics are many thanks to the availability of natural resources that become easier to work with thanks to the evolution of scientific research. Furthermore, sustainable fashion aims to not only minimize the environmental but also the social impact of textile production by making labour conditions fairer.
As mentioned before, sustainable fashion also includes social responsibility for the communities it may impact. Fair salaries and safe working conditions are important prerequisites for the future of employees who produce garments.
Indian streets are flooded with fast moving, cheap, and highly economical fashion options. Railway stations, every nook and corner, every commercial street, every block turn, always is filled with shops and tin shacks selling fashion produce, in bulk or

otherwise, but always hoarded with fabrics and clothing pieces and spin-offs of brands, the most popular ones being comic-con items, marvel t-shirts and joggers, and all forms of casual clothing and accessories including shoes and jewellery. Denims are a big attraction, and the most-trendy things are found in these tin shops at very throw-away prices, adding to a lot of fabric junk which ultimately has to be disposed off in waste-lands, when obsolete or damaged in bulk, because of rat infestations etc. a major section of population chooses to shop at these outfits, despite the awareness that the durability of these products is relatively lower. Socio-economic factors are not a restraint anymore, and trends do the deed better.

II. Sustainable clothing

Sustainable clothing refers to fabrics derived from eco-friendly resources, such as sustainably grown fiber crops or recycled materials. It also refers to how these fabrics are made. Historically, being environmentally conscious towards clothing meant

(1) buying clothes from thrift stores or any shops that sell second-hand clothing, or

(2) donating used clothes to shops previously mentioned, for reuse or resale.

In modern times, with a prominent trend towards sustainability and being 'green', sustainable clothing has expanded towards

(a) reducing the amount of clothing discarded to landfills, and

(b) decreasing the environmental impact of agro-chemicals in producing conventional fibre-crops (e.g. cotton).

Under the accordance of sustainability, recycled clothing upholds the principle of the "Three R's of the Environment": Reduce, Reuse, and Recycle, as well as the "Three Legs of Sustainability": Economics, Ecology, and Social Equity.

Through the utilization of recycled material for the manufacturing of clothing, this provides an additional realm of economic world profit. Sustainable Clothing will provide a new market for additional job opportunities, continuous net flow of money in the economy, and the reduction of raw materials and virgin resources. Source reduction or reducing the use of raw materials and virgin resources can ultimately reduce carbon emissions during the manufacturing process as well as the resources and carbon emissions that are related to the transportation process. This also prevents the unsustainable usage of extracting materials from the Earth by making use of what has already been used

Recycled clothing Recycled or reclaimed fibres are recovered from either pre or post-consumer sources. Those falling into the category of 'pre-consumer' are unworn/unused textile wastes from all the various stages of manufacture. Post-consumer textile waste could be any product which has been worn/used and have (typically) been discarded or donated to charities. Once sorted for quality and colour, they can be shredded (pulled, UK or picked, US) into a fibrous state. According to the specification and end use, these fibres can be blended together or with 'new' fibre.

While most textiles can be recycled, in the main they are downgraded almost immediately into low-quality end-uses, such as filling materials. The limited range of recycled materials available reflects the market dominance of cheap virgin fibres and the lack of technological innovation in the recycling industry. For 200 years recycling technology has stayed the same; fibres are extracted from used fabric by mechanically

tearing the fabric apart using carding machines. The process breaks the fibres, producing much shortened lengths that tend to make a low-quality yarn. Textiles made from synthetic fibres can also be recycled chemically in a process that involves breaking down the fibre at the molecular level and then repolymerizing the feedstock. While chemical recycling is more energy intensive than mechanical pulling, the resulting fibre tends to be of more predictable quality. The most commonly available recycled synthetic fibre is polyester made from plastic bottles, although recycled nylon is also available.

III.   Research Methodology

Data collection is the systematic approach to gathering and measuring information from a variety of sources to get a complete and accurate picture of an area of interest. Data collection enables a person or organization to answer relevant questions, evaluate outcomes and make predictions about future probabilities and trends.

Objectives
1. To understand the impact of fast fashion on economy and ecosystem.
2. To ascertain the reasons for sustainability in fashion
3. To ascertain the effect of demographical factors on the awareness of sustainable fashion.
    4.

Limitations:
1. Sustainable fashion and sustainable development are very broad concepts which may not be able to be covered to the full extent.
2. All economic factors and their effects may not be covered to the full.
3. Limited literature availability.

Data collection: The data is collected from the primary and the secondary sources.

Primary Data
Primary research consists of a collection of original primary data collected by the researcher. This will be done though the medium of questionnaire.It is formalized set of questions, with are logically and systematically arranged to collect the information useful for the proposed study.

Sample selection
The size of the sample for the present study is confined to 170 respondents. The questioner is circulated among 250 members by using whatsup, face book and other social media. Only 200 people responded 173 are considered as unbiased. So for this study 170 responses are considered.

Secondary Data
Secondary data is the data that have been already collected by and readily available from other sources. Such data are cheaper and more quickly obtainable than the primary data and also may be available when primary data cannot be obtained at all. This will be done though the medium of websites, magazines, newspapers etc.

<h1 style="text-align:center">IV.   LITERATURE REVIEW</h1>

A. SUSTAINABLE CLOTHING THROUGH CHARITIES

- **Making Climate Change Fashionable - The Garment Industry Takes On Global Warming". Forbes. 2015-12-16. Retrieved 2019-04-16.**

People can opt to donate clothing to charities. A charity is "a foundation created to promote the public good" which is exempted from taxation, and has a specific legal identity. People donating clothing to charitable organisations in some countries are often eligible for tax deductions, albeit the donations are itemized.

Most actors today agree that our modern society has to develop in more sustainable ways. This includes how we produce and consume clothing, shoes, accessories and other textiles. Virtually all major clothing companies in a few countries today have a work in progress in the area of sustainability, particularly in the production phase, but also increasingly at the user level to encourage increased reuse and recycling. At major clothing companies, CSR managers and sustainability heads today openly discuss how they work to realign their business models, production processes and store concepts towards improved sustainability.

But despite the growing interest in sustainability issues within the fashion industry, currently there is no common definition of what sustainable fashion actually means. As a starting point, Green Strategy, a leading UK based charity, has developed the following definition of "more sustainable fashion":

More sustainable fashion can be defined as clothing, shoes and accessories that are manufactured, marketed and used in the most sustainable manner possible, taking into account both environmental and socio-economic aspects. In practice, this implies continuous work to improve all stages of the product's life cycle, from design, raw material production, manufacturing, transport, storage, marketing and final sale, to use, reuse, repair, remake and recycling of the product and its components.

B. PATRIOT ACT WITH HASAN MINHAJ:

- **Netflix special: The Ugly Truth of Fast Fashion, 2019.**

It is a form of expression, because what you wear is a representation of you in some way. It is a huge part of our culture, and an average individual spends USD 1.1 Million dollars on shopping every year, and that is only during festive seasons. In the 1980s, an average person got only 12 articles of clothing every year. Now, the average individual buys 64 new pieces a year, and wears each for an average of 3 times or less. Fast fashion is basically a chain of retailers making garments based off of runway, and putting them in a retail environment. Fast fashion is about making trendy clothes quick, cheap and disposable, like toilet paper that almost makes you look like arianagrande. Fast fashion is popular because it democratises high fashion, and they do that by knocking off designer brands at scale. Examples, Fashion Nova, H&M, Zara. Balenciagas replaced by H&M. This entire business model has changed the world, and you can now strut around as a throw away version of Cardi B. Fast Fashion *is* the fashion now. We want to look expensive, without paying the price. The feeling of

luxury is all we're looking for. But just like Cinderella, everything dissolves at midnight. The only mass market retailers that can provide for this demand, at the affordable price-point, are Zara and H&M. And that's why fast fashion is the only segment of the fashion industry that has grown, in the last 15 years. Fast fashion companies are killing legacy brands, for example, Levi's, GAP, etc.

Zara's parent company, Inditex, is the biggest retail clothing company in the world. The founder, Monsieur Ortego, therefore is the seventh richest person in the world. He started this retail empire back in 1975, which he first called "Zorba." Even back then, Zara was knocking off bigger, other brands. They pioneered and perfected the fast fashion business model, and are today the world's biggest retail fashion brand.

Legacy brands spend months designing and processing new clothes every season, and it takes several years for them, sometimes. In the 80s, Zara completely changed its ballgame. Kim Kardashian has taken to the internet to slam fast fashion after Fashion Nova ripped off her designer outfit for a price of $50 only. Knock-offs are mostly not counterfeits, but cheaper substitutes. They resemble the design of the prototype. And picking knock off so fast means companies use real time data and are scouring social media with madness, to ascertain demand and supply for their products, which brings us to the second tier of this business model; Dynamic Assortment, and shifting, which basically translates to selling new things everyday. It constantly pops out more products. Example: H&M brings about 53 seasons of clothes, with new fashion coming in every Monday, Thursday and Friday.

Fast fashion is stylish and chic. Because whenever we go out, the outfit has got to be different from last week, and we always have to be rotating new looks. Compared to 20 years ago, we're only keeping what we buy, half as long. And now legacy brands have all said that they want to speed up the supply chain, to be akin to fast fashion. And we all know the working conditions prevalent in these factories where clothes are being manufactured. And a lot of people don't know what these clothes are doing to the environment. In 2015, the guardian said that the textile industry is producing more greenhouse gases than international flights and maritime shipping combined. The clothes in your suitcase create more problems than the flight you're taking. 10,330 litres of water to produce one jacket, aka 34 years of drinking water for one person: synthetic fabrics, i.e., polyester, nylon, etc., use 342 million litres of oil per year (stats: "a new textile economy": Ellen MacArthur Foundation, 2017.) So basically an average yoga pant, is made of oil. Using crude oils to make synthetics is bad, but when it comes to making viscous, it's worse. About 33% of viscous is made of ancient or threatened forests (via: canopy), and the processing is altogether another thing, with almost 70% dumped or incinerated, and only 30% being worn by people. Making clothes is like a human centipede of supply chain, which uses a lot of toxic chemicals in processing. Most of these chemicals get disposed into rivers, affecting children in the process.

V.   Sustainable economic development

Sustainable economic growth is economic development that attempts to satisfy the needs of humans but in a manner that sustains natural resources and the environment for future generations. An economy functions in the ecosystem. We cannot separate the economy from it. In fact, an economy cannot exist without it. The ecosystem provides the factors of production that fuels economic growth: land, natural resources, labour,

and capital (which is created by labour and natural resources). Sustainable economic growth is managing these resources in a manner that they will not be depleted and will remain available for future generations.

While many economists and people disagree about the importance of the environment regarding economic activity, the following facts are seldom disputed:

1. The extraction and depletion of natural resources, as well as pollution and permanent changes made to the landscape, are caused by economic activities and can harm to the environment.

2. Many of the costs of the harm created by economic activities are not borne by those who cause it but by other people who neither obtain the benefits from the economic activity or agree to pay the costs related to it. Pollution is a perfect example. Businesses are permitted to pollute to a certain degree (less now than in the past). They don't have to pay for the pollution, but society does by dirty air, water, and contaminated soil that affect the quality of our air, water, and food. This pollution can lead to serious health effects, which may reduce the quality of life and health of the population. We call a cost borne by someone who did not agree to bear it an externality.

3. Humans live in an ecosystem and cannot survive without it. If we destroy the environment, we will eventually destroy ourselves.

SUSTAINABLE FASHION MATTERS

With so many problems going on these days - climate change, plastic pollution, deforestation, loss of coral reefs & biodiversity, water scarcity, just to name a few - the fashion industry is not necessarily top of mind for most people as either a problem or solution. Unfortunately, we have got some bad news for you - the clothing industry is dirty and a significant contributor to environmental & human damage. Good news is that sustainable fashion addresses many of these issues in ways you may not expect.

Sustainable fashion brands create fashion in a way which is most considerate of humanity and the environment, reducing the environmental impact wherever possible. The ultimate goal is to have a system which works without leaving a negative footprint.

1. SUSTAINABLE FASHION SAVES NATURAL RESOURCES

A study from 2015 shows that 97% of what goes into making clothes are new resources, with only 3% of it being recycled materials. Recycled fibers have proven to be a much more sustainable option, as they reduce pressure on virgin resources and tackle the growing problem of waste management.

2. SUSTAINABLE FASHION REDUCES YOUR CARBON FOOTPRINT

The global fashion industry emits a hefty amount of greenhouse gases per year, thus contributing massively and actively to global warming. One of the reasons is that the vast majority of our beloved clothes are petroleum-based and made from fossil fuels, including polyester, acrylic & nylon (check your clothing labels, you may be surprised). These materials require significantly more energy in the production phase than natural or recycled fibers.

Sustainable brands on the other side often use materials from natural or recycled fabrics that require significantly less to no chemical treatment, little water, less energy and no fertilizers or pesticides to grow. Most organic fabrics such as linen, hemp, organic

cotton and other raw materials (made from sustainable wood pulp) are even biodegradable. These environmentally-sound fabrics go easy on the planet and are amazing sustainable alternatives.

3. SUSTAINABLE FASHION SAVES ANIMAL LIVES

Sustainable fashion brands have started to increasingly embrace the use of cruelty-free alternatives, and there's one for nearly every piece of fashion materials. polyester made with trash from the oceans, bags created from recycled seatbelts, plant-based compostable sneakers, silk created from yeast, and bio-fabricated vegan wool. But one of the most demanded leather alternatives these days comes from pineapples.

4. SUSTAINABLE FASHION REQUIRES LESS WATER

Water is a major resource for the fashion industry. It is used in the dyeing and finishing process for nearly all of our clothes. It takes an incredible amount of 2,700 litres of water to produce a single T-shirt. Cotton in particular is highly dependent on water, but is usually grown in hot and dry areas where water is a scarce resource already. organic cotton reduces water consumption by 91% as opposed to conventional cotton. However, only 1% of global cotton production to date is organicOther sustainable fabrics that require little to no water during the production phase include linen, hemp, REFIBRA & recycled fibers like recycled cotton.

5. SUSTAINABLE FASHION SUPPORTS FAIRER & SAFER WORKING CONDITIONS

Believe it or not, but modern-day slavery does exist. Minimum wages (if at all), endless working hours, unacceptable health & safety conditions and the prohibition of workers unions is what reality for most garment workers in the fast fashion sector looks like. Moreover, verbal and physical abuse are still common practise in many parts of the industry. A few informative documentaries exist on the social injustices of the fast fashion industry. Eco-ethical brands advocate for providing humane working conditions, health care and fair wages for their workers, which are typically above average. Generally, they show a larger purpose towards creating economic opportunities for those in need to end poverty. We all want to feel great about our clothes, and that includes feeling great about knowing under what conditions they were made. The well-being of people involved are just as valuable as the environment and animals.

6. SUSTAINABLE FASHION IS HEALTHIER FOR PEOPLE & PLANET

Fast fashion items often undergo a long and intense chemical process before ending up on our hangers. Around 8,000 different synthetic chemicals are used to dye, bleach and wet process garments. Those chemicals often cause diseases or even deaths among farmers and inflict serious birth defects on their children. Some of these chemicals pose a real danger to our health as well, as our skin absorbs anything we put on it, including the chemicals in our clothes.

DATA ANALYSIS AND INTERPRETATION

To ascertain the awareness and consumerism towards sustainable fashion, a questionnaire was designed and distributed at random to 200 and only 170 respondents, who gave unbiased anonymous responses. These were compiled and have been analysed therefore.

S NO	PARTICULARS	CATEGEORY	NO OF RESPONDENTS
1	Gender	Male	60
		Female	110
2	Age	Below 20 Years	37
		20-30	30
		30-40	42
		40-50	43
		above 50	18
3	Income	Below 20,000	27
		20,000-30,000	46
		30,000-40,000	39
		40,000-50,000	30
		Above 50,000	28
4	How many times do you shop in a year	once	30
		Occasionally	45
		very often	95
5	where do you shop from	online	84
		Vero moda	32
		Zara	23
		other	31
6	Are you aware of sustainable fashion	Yes	110
		No	60
7	Are you aware of the adverse effect fast fashion has on the eco system and climate change	Yes	119
		No	51
8	what happens to the failed fashion products according to you	Don't know	32
		charity to home less	45
		Clearance sale	54
		Dumped in waste land	39
9	Money spent on shopping for clothes per annum	Below 10,000	15
		10,000-20,000	56
		20,000-30,000	52
		Above 30,000	47
10	would you be willing to purchase sustainable fashion instead of fast fashion	Yes	102
		No	68

Analysis :

1. Out of 170 respondents, 60 are male and 110 are female respondents that is 35% of the respondents are male and the remaining 65% are female respondents .

Gender of the Respondents
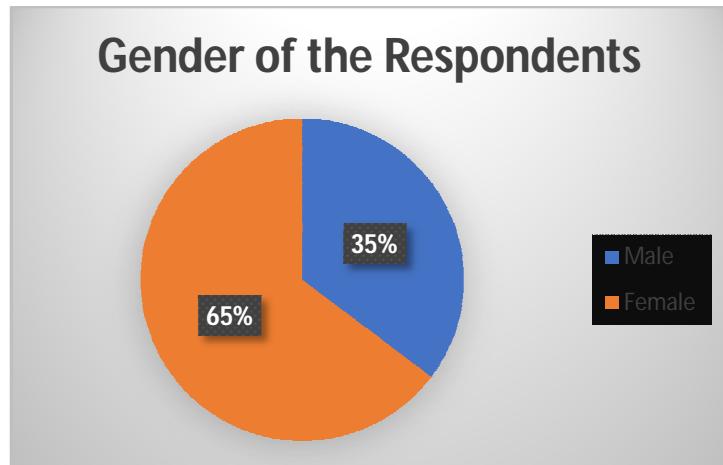
2. Age group of the respondents are categorised from 20 years to 50 years
   The below are the graphs showing the demographical factors of the respondents

Age of the Respondents

	Below 20 Years	20-30	30-40	40-50	above 50 Years
Series1	37	30	42	43	18
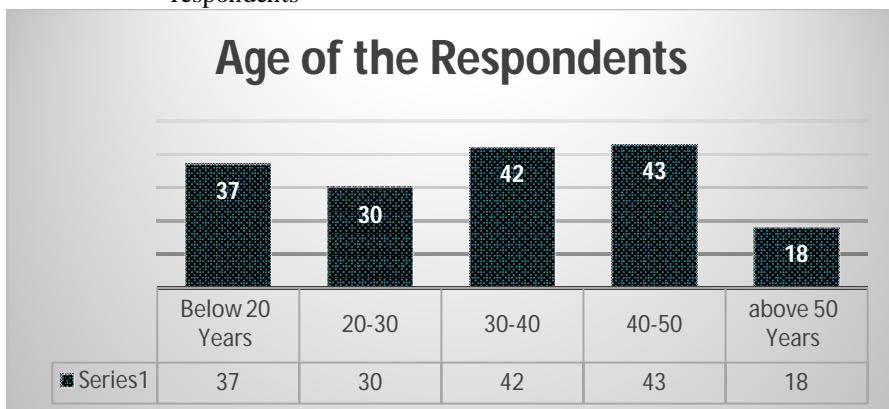
3. Respondents are from different income groups and are categorised into below Rs 20,000 above Rs 50,000
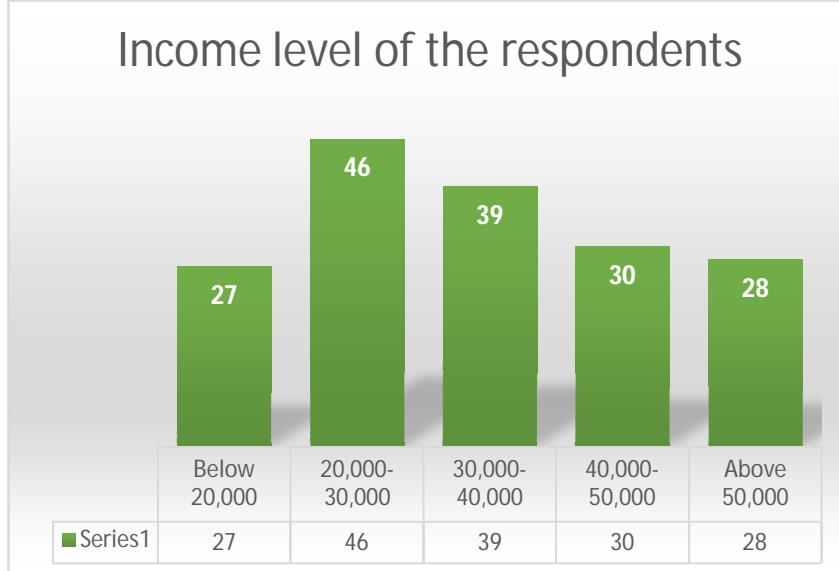
Study of association between the demo graphical factors and the awareness of sustainable fashion

Objective 1: H0: There is no significant association between gender and the awareness of the sustainable fashion

H1: There is a significant association between gender and the awareness of the sustainable fashion

Table: I

	Yes	No	Total
Male	39	21	60
Female	71	39	110
Total	110	60	170

To know the association between the gender and the awareness chi-square test is used. The calculated P value is 3.44 and the table value at a significant level of 5% with a degree of freedom of 1 is 3.84. As the calculated value is less than the table value the null hypothesis is accepted. There is no significant association between the gender and the awareness level of sustainable fashion.

Objective 2: H0: There is no significant association between Income and the awareness of the sustainable fashion

H1: There is a significant association between Income and the awareness of the sustainable fashion

Table II

particulars	Yes	No	Total
Below 20,000	17	10	27
20,000-30,000	30	16	46
30,000-40,000	25	14	39
40,000-50,000	19	11	30
Above 50,000	18	10	28
Total	110	60	170

The calculated P value is 0.45 and the table value at a confidence level of 5 % with a degree of freedom of 4 is 9.1. As the calculated value is less than the table value we will accept the null hypothesis. There is no significant relationship between income and the awareness of sustainable fashion.

Objective 3 : H0: There is no significant association between Income and the awareness of the sustainable fashion

H1: There is a significant association between Income and the awareness of the sustainable fashion

Table III

Particulars	Yes	No	Total
Below 20 Years	24	13	37
20-30	19	11	30
30-40	27	15	42
40-50	28	15	43
above 50 Years	12	6	18
Total	110	60	170

The calculated P value is 0.329 and the table value at a confidence level of 5 % with a degree of freedom of 4 is 9.1. As the calculated value is less than the table value we will accept the null hypothesis. There is no significant relationship between Age and the awareness of sustainable fashion.

CONCLUSIONS

1. 2/3rd of the sample chosen randomly, are aware of sustainable fashion
2. People are getting better aware of the impacts that sustainable fashion has on the ecosystem.
3. Sustainable fashion is a sign of an economy that is concentrating on sustainable development, and reduces water consumption, is safer for the people and the planet, and doesn't affect the economy negatively either, making it a much safer choice to adapt.
4. 70% of the consumers surveyed are willing to try sustainable fashion option in their future purchases.
5. Most people have heard of sustainable fashion, in India, but are unaware of brands and labels catering to the same.
6. Sustainable fashion and economic development go hand in hand.

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LANDLESS AGRICULTURE LABOURERS IN KARNATAKA; AN ANALYSIS

SHIVA KUMARA B.S
Research Scholar, Department of Economics, Jnanabharathi Campus, Bangalore
University, Bangalore

DR. T. RAJENDRA PRASADA
Professor of Economics and Research Guide, Department of Economics, Jnanabharathi
Campus, Bangalore University, Bangalore

ABSTRACT

Now a day's agricultural labourers are considered as a pitiable class in India as well as Karnataka. They are highly depending on landholders to fulfill their basic needs; they are not free from the bondage and also excluded by the mainstream of the society. Their socio economic conditions as well as level of income and standard of living are very low due to the unorganized nature of the system and heavy indebtedness. In this background the present paper tries to examine the agricultural labour scenario in Karnataka and it also analyzes the problems of agricultural labour in Karnataka. The study is based on only secondary data. The study has observed that percentage of agricultural labourers have increased from 16.65 per cent to 28.74 per cent during the period 1961 to 1991, however it has slightly decreased to 25.4 percent in 2011 and Annual Growth Rate (AGR) of agricultural labourers has drastically decreased from 60.30 percent to -3.78 percent during the period. It is clear that share of agricultural labourers has recorded negative growth. Rate at means that, agricultural labourers have moved from agriculture to non-agriculture sector because of repeated failure of crops, low wage rate, increasing cost of production, impact of globalization and lesser or no minimum support price for farmers. The paper throws light on the problems of agricultural labourers, government policy measures and suggestions to improve the socio economic conditions of agricultural labourers in Karnataka. Finally the study concludes that agricultural labourer's condition is not satisfactory in India as well as Karnataka, and government should take some proper policy measures to improve the socio economic conditions of agricultural labourers.

Key Words: Karnataka, Agriculture, Labour, Scenario, Problems, Programmes

INTRODUCTION

Agriculture is the seedbed of the Indian economy and at present it is among the top producers of various agricultural commodities in the world. 'It has already made a significant contribution to the economic prosperity of advanced countries and its role in the economic development of less developed countries is of vital importance' (Leki, Jogindersingh, 2003). The agriculture sector acts as the core engine of economic growth, it contributes a considerable share in Indian exports. Share of exports of agriculture and allied products in India is 12.30 per cent at the end of April 2016 (Indian

Economic Review April 2016). Agriculture is the main source of food and it has also provided nutritional security. It creates employment opportunities and it plays a significant role in the poverty alleviation.

Agricultural labourers are socially and economically poorest section of the society. Agricultural labourer households constitute the historically deprived social groups, displaced handicraftsmen and dispossessed peasantry. They are the poorest of the poor in rural India. Their growth reflects the colonial legacy of under development and the inadequacies of planning intervention in the past. Overcrowding and growth of agricultural labourer continued unabated, given poor labour absorption in the non-agricultural sector and also inadequacies of reforms in the agrarian structure. The poverty syndrome among agricultural labourers needs to be read against such a background of prolonged rural under development, uselessness, unemployment, low wages, under-nutrition, illiteracy and social backwardness constitute the poverty syndrome among agricultural labourers.

OBJECTIVES AND METHODOLOGY OF THE STUDY

The main objective of the present study is
1.   To evaluate the employment opportunities of the landless.
2.   To study the socio-economic conditions of the landless labourers.
3.   To assess the problems of the landless labourers.

CONTEXT OF THE STUDY

Agriculture plays an important role in any developing economy like India as well as Karnataka. The agriculture sector of India has occupied almost 43 percent of India's geographical area. Agriculture is the vertical backbone of the country, as many as 54.6 per cent of all workers (agricultural labourers, cultivators, total farm workers) and 42 per cent of the rural workforces in India are directly engaged in farm-related activities. Agriculture contributes 16.1 per cent to the Gross Domestic Product (GDP) in 2014-15 at constant 2011-12 prices (Indian Economic Review, April-2016).

Agriculture is playing a pivotal role in the growth of Karnataka state economic activity. Karnataka is one of the major states that practices agriculture in India. Seventh largest state in geographical area cover 1.92 lakh sq km accounts for 6.3 percent of the geographical area of the country. The state has 30 districts and 176 taluks spread over 29,340 villages. As per census of 2011, the total population is
6.11 crores (Bende M J 2013). Decadal growth of population from 2001-2011 is 15.67 percent. According to 2011 census, agriculture supports 13.74 million workers, of which 29.4 per cent are total cultivators and 25.4 per cent total agricultural workers. A total of 123.100 km^2 of land is cultivated in Karnataka constituting 64.6 percent of the total geographical area of the state.
Agriculture in Karnataka is heavily dependent on the southwest monsoon. While only 26.5 per cent of the sown area (30,900 km²) is under irrigation, 64.60 per cent of the

total geographical area is under cultivation (Bende M J 2013). Agriculture is the major occupation of a majority of the rural population in Karnataka. Currently about 60 percent of the total workforce in the state are directly engaged in the agriculture sector. Agriculture as a primary activity is a major source of livelihood for the majority of rural population of the state. Agriculture and allied activities contribute 17.5 percent (current prices) to the states Gross State Domestic Product (GSDP) in 2014-15.

Agricultural labourers are one of the most important production components of agriculture. Agriculture labourer's contribution in the development of agriculture is very high but their share in the gains of development has been the lowest. Without agricultural labourers agriculture production is inconceivable, although they have always been the most neglected class and their living condition is miserable in the state. A recent study by Nagaraj M Muggur (2013) explain the problems and socio economic conditions of agricultural labourers in Karnataka, in his study mainly focus on uncertainty of employment in agriculture sector in the state. Agricultural labourers are deprived of the benefits, security and advantages, which are available to the industrial workers. Makbul Hussainn Khan (2013) explain that, 'agricultural labours are not free from the bondage or slavery, their income, standard of living and social status are very low having unorganising system of farms workers'. Agricultural labourers are the worst affected people. Because they are untrained, illiterates, unskilled and they have no alternative employment opportunities in the rural area. Their income is very low and employment is seasonal. Therefore, they have poor purchasing power and bargaining power as compared to other labourers. Further, they are suffering from various problems in the agriculture sector like injuries in the work place, bad working condition, lengthy working hours, and mental harassment and so on.

Agricultural labourers work both in the house and farms of their masters but their economic condition lives have not improved. Majority of agricultural labourers are socially and economically disadvantaged poor group in India and Karnataka. Agricultural labour still remains serfdom system. Unemployment has worsened their living conditions and always they suffered from heavy indebtedness. With this background an attempt has been made to analyze the scenario of agricultural labourers in Karnataka, and to explore issues, problems and Government measures to improve their socio-economic conditions.

MEANING AND DEFINITIONS OF AGRICULTURAL LABOURERS

Labour is one of the most important factors of production in any developing economy. Labour is not only important in its use, but also in social and political aspect. It is not easy to define the concept of agricultural labour. Various attempts have been made to define Agricultural labour by different expert committees appointed by the government from time to time (punam 2012). Agricultural labour is a person who works on another person's land for their livelihood and fulfills their basic needs

• The First Agricultural Labour Enquiry Committee (1950-51) has defined this as "those people who are engaged in raising crops on payment of wages".

• The Second Agricultural Labour Enquiry Committee (1956-57) enlarged the definition of agricultural labour to include "those who are engaged in other agricultural

occupation like dairy farming, horticulture, rising of livestock, bees poultry etc.".

• In 1961 Census, agricultural workers were those who worked on the land of others and received income in terms of kind or cash or both.

• According to the National Commission on Labour, "an agricultural labour is one who is basically unskilled and unorganized and has little for its livelihood other than personal labour".

• According to 1991 Census definition "a person who works on another person's land for wages in money, kind, or share is regarded as an agricultural labour.

• An Agricultural Labour Family was defined as a family which derived the bulk of its income from agricultural wages.

• Generally, agricultural labourers are those who are engaged in raising crops on payment of wages.

AGRICULTURAL LABOUR: THEORETICAL PERSPECTIVE

Agricultural labour is one of the most important and active factor of production not withstanding socially depressed and economically backward classes in India. Their income is very low due to quitebleak earnings. Their employment is irregular and they have no alternative employment opportunities. Most of the agricultural labourers are from scheduled castes, scheduled tribes and other backward caste. Therefore they are depressed class and they cannot fight for their rights. They are generally unorganized and they have no bargaining and purchasing power. In this regard, it is essential to discuss the scenario, issues and problems of agricultural labourers in Karnataka (punam 2012).

CHARACTERISTICS OF AGRICULTURAL LABOURERS

Main characteristics of agricultural labourers are as:

The Agricultural Labourers are highly Migratory in Character: Agricultural labourers are facing severe unemployment problem as there are no other remunerative job opportunities in rural areas. Employment in agriculture is seasonal and there is hardly any escape from hard work. In this reason, they are migrating from agriculture to nonagricultural sector for searching employment opportunities and for better living.

Unorganized and Economically Depressed Class: Agricultural labourers are unorganized, economically disadvantaged poor workers in the society. Basically they are illiterates and ignorant people. Therefore, they could not organize unions and they cannot fight for their privileges. Consequently, it is not easy for them to bargain with the landholder's secure good wage.

Low Social Status: Most agricultural workers belong to scheduled caste, scheduled tribes and other backward class. 'Low caste and depressed classes have been socially handicapped and they had never the courage to assert themselves. They have been like dump-driven cattle' (Vetrivel, Manigandan, 2013). Therefore, agricultural labourers suffered from heavy indebtedness, low wage, low income and low socio economic status in the society.

Bargaining Power is limited: Agricultural labourers are basically untrained and

unskilled workers. Thus, their purchasing power and bargaining power is very less. Undoubtedly, agricultural labourers are most exploited class of people of India.

Agriculture Labourers are Scattered: Agricultural labourers in India is being widely scattered over 5.6 lakh villages. Vast number of agricultural labour lies scattered all over India; there has been no successful attempt for long, to build their effective organization even at the state level not to speak of the national level (Vetrivel, Manigandan, 2013). Agricultural labourers are unskilled, lack of training and illiterates. Agricultural serfs or bonded labourers. At the bidding of the landholders.

The agricultural labour is hardly ever covered by any rules and regulations adopted by the government (Lekhi and Jogindersingh, 2003). The employer of agricultural labour himself may not be a person of high means (Lekhi and Joginder singh, 2003).

AGRICULTURAL WORKFORCE IN KARNATAKA

The workforce of the agricultural sector is classified into three major categories namely; cultivators, 'whose main source of earnings, due to small and sub-marginal holdings, is wage employment'. The second category is agricultural labour, a person who works on another person's land for wages in money, kind, or share is regarded as an agricultural labour and third category is other workers engaged in agriculture allied activities like dairy farming, horticulture, rising of livestock, bees poultry etc. This study mainly concerned on agricultural labour. In this context, below the table is useful to analyze the agricultural labour scenario during the period of 1961 to 2011.

Table 1.1: Agricultural Labour Scenario in Karnataka 1961- 2011

year	Karnataka Population Total		Total Cultivators		Total Agricultural Labourers		Total Workers Agricultural	
	In Millions	% AGR	(In %)	% AGR	(In %)	% AGR	(In %)	% AGR
1961	23.6		53.7		16.65		70.36	
1971	29.3	24.15	40	-25.51	26.69	60.30	66.69	-5.21
1981	37.1	26.62	38.25	-4.37	26.78	0.33	65.03	-2.48
1991	44.8	20.75	34.63	-9.46	28.74	7.31	63.1	-2.96
2001	52.7	17.63	29.48	-14.87	26.4	-8.14	55.88	-11.44
2011	61.1	15.93	29.4	-0.27	25.4	-3.78	54.8	-1.93

Source: Census of India 2011   **A G R : Annual Growth Rate**

Fig. 1.1 : Agricultural Labour Scenario in Karnataka 1961-2011
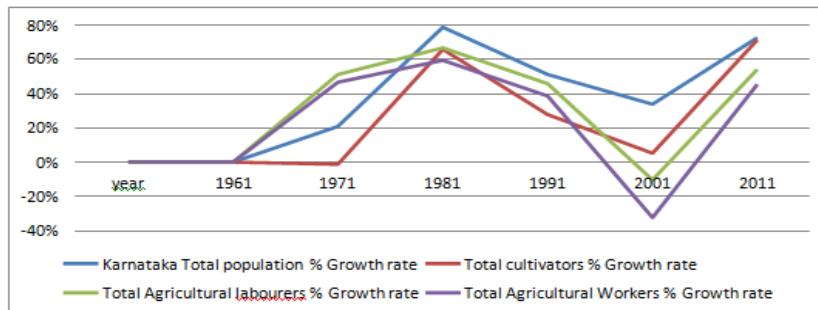
Table 1.1 and Fig 1.1 clearly present the scenario of agricultural labourers in Karnataka during the period 1961 to 2011. As per the table, the total population has increased from 23.6 million to 61.1 million and Annual Growth Rate (AGR) is 24.15 percent to 15.93 percent from 1961 to 2011. It is clear that population has increased and AGR is slightly decreased in Karnataka , but at the same time percentage of cultivators has declined from 53.7 per cent to 29.4 percent and AGR is -25.51 percent to -0.27 percent from 1961 to 2011. Agricultural labourers have increased from16.65 per cent in 1961 to 28.74 per cent in 1991, however it has slightly reduced in 2011 to 25.4 per cent and AGR is 60.30 percent to -3.78 percent during the period. It is also clear that percentage of cultivators and agricultural labourers have negative growth. According to above the data, it may be concluded that agricultural labourers are shifting from agriculture to non-agriculture sector.

Table 1.2 : Distribution of Agricultural Workforce in India and Karnataka 2011

Workforce	persons	India				Karnataka			
		Rural	Urban	rural %	urban %	rural	Urban	rural %	urban %
Cultivators	male	79839098	2867626	31.69	25.93	4565677	18801	34.91	28.56
	female	35129400	856516	13.94	7.74	1775253	51688	13.57	7.85
agricultura l labourers	male	77930236	4810115	30.93	43.49	3047116	23613	23.30	35.87
	female	59064215	2525267	23.44	22.83	3690097	18257	28.22	27.73
	total	25196299	1105954	100	100	1307813	65849	100	100

Source: Agricultural Statistics at a Glance 2014

Table 1.2 shows that, Distribution of Agricultural Workforce in India and Karnataka 2011. In the category of agricultural workforce there are two sub-groups they are agricultural labourers and cultivators. According to 2011 census in India, percentage of cultivators there is slight higher in the rural male cultivators that is, 5.76 per cent as compared with the urban male cultivators. Whereas, female rural cultivators are bit higher that is 6.2 per cent compared to urban female cultivators in India. Rural male cultivators in Karnataka are higher that is 6.35 per cent as compared with urban male cultivators whereas, rural female cultivators also higher up to 5.72 percent as compared with urban female cultivators.

In another group of agricultural workforce that is agricultural labourers. There is a drastic difference in male rural and urban agricultural labourers that is 12.56 per cent high in urban area. In a parallel, female rural agricultural labourers are slightly higher 0.61 per cent than female urban agricultural labourers. When we observe at Karnataka during 2011, the percentage of male agricultural labourers in urban are 12.57 per cent higher, compared with male rural agricultural labourers. As on another side, female agricultural labourer in rural area is 0.49 per cent higher than urban female agricultural labourers.

In total, India and Karnataka level male urban agricultural labourers are higher than rural. Whereas, rural female agricultural labourers higher than urban. It may be due to more opportunity at urban area like construction work, high wages and all seasonal work and so on. This situation Leeds to improving the socio economic conditions of male agricultural labourer, that's why they are moving from agriculture to non-agriculture sector.

PROBLEMS OF AGRICULTURAL LABOUR IN KARNATAKA

The problems of agricultural labour in Karnataka are increasing from year to year. In India and Karnataka, Agricultural labourers are largest unorganized, poorest, resource less workers of socially and economically weaker section of the society. Agricultural labours are not free from the slavery or bondage even in Karnataka. "They are highly indebted, once they fall in debt; it is hard to get out of the bondage. Hours of work in agriculture depend upon natural factors because; the working conditions are obviously fixed by nature. The hours of working and problems of agricultural labourers varies from region to region, season to season and from crop to crop depending on such factors on pressure of population, availability of land for cultivators, wage, and fertility of land etc. (Mugur M Nagaraj, 2013). Their standard of living, consumption level, and income level is very low in the absence of alternative sources of employment. In addition to the above said problems there are various problems faced by agricultural labours in Karnataka (Siddaraju and Ramesh 2013). They are:

1. **Unorganized:** agricultural labourers in Karnataka are totally unorganized as they are illiterate and economically backward section of the society. They have no capacity to bargain for wage and hours of working.
2. **Bad socio economic condition:** agricultural labourers are highly depending on landholders for fulfilling their basic needs. Almost they have been neglected and resource less class in rural areas.
3. **Seasonal employment:** agriculture employment in Karnataka is seasonal. Labourers are engaged in agriculture for five to six months in a year. Remaining days they are almost free from the agriculture work, it's creates unemployment situation in our state.
4. **Indebtedness:** agricultural labourers are basically come from depressed classes and economically weaker section in rural areas. They are highly depending on landholders of all the basic amenities of their life.
5. **Natural factors:** agriculture continues to be a gamble on the monsoon in India as well as Karnataka. Agriculture depends on sun and rain. If nature is good, work increases otherwise agricultural labourers are unemployed**.**

GOVERNMENT MEASURES TO IMPROVE THE CONDITIONS OF AGRICULTURAL LABOURERS

Central and state governments have taken some policy measures to improve the socio economic condition of agricultural labourers since independence. Fixing of minimum wages for agricultural labourers, abolition of bonded labour, removal of disabilities the ceiling on land holdings and redistribution of surplus land among the land less labourers etc. To encourage the formation of labour co-operatives the government has introduced various employment guarantee schemes from 1977 to create employment opportunities to agricultural labourers. Government has introduced the Twenty Point Programme to improve the agricultural labourer's socio economic condition in the economy. Government has also introduced Minimum needs programmes in the fifth five year plan to improve the consumption level, provision of health facilities, drinking water,

education electrification and housing facilities to landless labourers. Rural Review Committee (1969) recommended the establishment of Small Farmers Development Agency (SFDA) and Marginal Farmers and Agriculture Labour Development Agency (MFALDA) to increase the labourer's income, improved inputs and practices will create employment opportunities. Government has introduced the special schemes for providing employment opportunities (Siddaraju and Ramesh 2013) like,

- Integrated Rural Development Programme (IRDP)
- Food for Work Programme (FWP)
- Drought-Prone Areas Programme (DPAP)
- Desert Development Programme (DDP)
- National Rural Employment Programme (NREP)
- Rural Landless Employment Guarantee Programme (RLEGP)
- Jawaharlal Rojgar Yojana
- National Scheme of Training of Rural South for Self Employment (TRYSEM)
- Abolition of Bonded Labourer Act
- Mahatmagandhi National Rural Employment Guarantee Act (MGNREGA)

SUGGESTIONS TO IMPROVE THE CONDITIONS OF AGRICULTURAL LABOUR

In order to improve the socio-condition of the agricultural labourers some of the suggestions are,

- Distribution of surplus land among the landless labourers.
- Fixing working hours to improve the working conditions of agricultural labourers
- Introduce remunerative active economic measures in agriculture
- Abolition of bonded labourers
- Fixation of Minimum Wages
- Introduce the modern method of agriculture to improve the working conditions of agricultural labourers.
- Improve the bargaining and purchasing power of agricultural labourers
- Government programme should reach the weaker section of the society
- Improving the socio economic conditions of scheduled caste, scheduled tribes and other backward class of agricultural labourers.

CONCLUSION: This paper has made an attempt to study the scenario of agricultural labourers in Karnataka. Study results show that the percentage of population has increased, at the same time percentage of agricultural labourers has decreased. In Karnataka, agriculture workforce reduced from 17.60 million in 2014-15 to 12.91 million in 2019-20. It clearly shows that 4.69 million workforce reduced during the period (FICCI Report). Study found that agricultural labourers have increased from
16.65 percent to 28.74 percent during the period of 1961 to 1991; however it has come down to 25.4 percent in 2011 and AGR is 60.30 percent to -3.78

percent during the period. It is also clear that percentage of and agricultural labourers have negative growth. Agricultural labourers moved away from agriculture to non-agriculture sector, Due to repeated failure of crops, low wage rate, increasing cost of production, impact of globalization and lesser or no minimum support price to farmers. Agricultural labour are facing various problems like, low socio-economic conditions, lack of training, unorganized, seasonal employment, bad working condition, lengthy working hours, low wage, income and standard of living is very low in Karnataka. A large percentage of the agriculture workforce across the states moved away from agriculture due to employment is irregular in Karnataka. Government should take proper policy measures to improve the socio-economic conditions of agricultural labourers in Karnataka.

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TO EVALUATE THE POSTURAL CHANGES IN CERVICAL AND THORACIC SPINE PRE & POSTPARTUM WOMEN WITH AND WITHOUT NECK PAIN

Sriram Nelakurthy[1], Manisha Saharan[2], Ajeet Saharan[3]
Maharaj Vinayak Global University,Jaipur

ABSTRACT

Aims and objectives:

Neck pain and postural changes in the cervical and thoracic spine are the frequent complaints which develop during pregnancy and postpartum. These may be due to the postural changes/adaptations seen usually in the prepartum and postpartum phase of pregnancy. The aim of the study to assess the cervical and thoracic postural angles of prepartum women with neck pain. To compare the cervical and thoracic postural angles in pre-partum women without neck pain. To compare the cervical and thoracic postural angles in post-partum women without neck pain.To asses and document the cervical and thoracic postural angles in nulliparous,primagravidaand multi gravida women.

Methodology: Subjects were nulliparous women (n=40),Prepartum women with and without neck pain(n-40) Postpartum women with and without neck pain(n=40).The subjects were invited to fill in the questionnaire after approval was taken. The sample was analysed by calculation the prevalence of neck pain. Chi square test was used to analyse the association between neck pain and associated risk factors. Postural changes in the cervical and thoracic spine was taken and analysed in Image J software to see the difference the groups. One way ANOVA was used to analyse the difference in between the groups.

Results: The prevalence of neck pain is 53.8% (43/80) in prepartum and postpartum women. There is a significance (p=0.02) difference in between neck pain occurrence and parity and parity and number of live children. Breast feeding and in supported sitting position 52.2 %(CI=95%) reported of neck pain. Neck pain did not refrain women from doing their household works or job (p=0.395, 0.639, 0.313).Cervical and thoracic angles measured and compared in between all the groups has a significanceof-0.005 (cervical angle) and p=0.36 (thoracic angle) respectively.

Interpretation & conclusion: The prevalence of neck pain and postural changes seem to be significant in Warangal population of prepartum and postpartum women. Age, employment were not considered as prediction factors. Weight, education, number of live births   and   parity are playing a significant role in developing neck pain. Further research should focus on the postural changes and neck pain occurring in the same women from nulliparous to postpartum period. Progressive longitudinal study is required.

Key words: Neck pain, nulliparous women, prepartum women, postpartum women, postural changes in cervical and thoracic spine.

Introduction:

While pregnancy is a common event for reproductive-age women, surprisingly little has been published about the physical and emotional changes that typically occur during pregnancy and the postpartum period. Better understanding of the changes in health status that occur over the course of pregnancy could help women to define their expectations and to manage them.

In human anatomy the vertebral column consists of the cervical, thoracic, lumbar, sacral and coccygeal vertebrae, the primary two curves (thoracic and sacral) retain their original posterior convexity whereas the secondary two curves (cervical and lumbar)show reversal of this original posterior curve. The thoracic and sacral curves are known as kyphotic curves whereas the cervical and lumbar curves are known as lordotic curves."

Physical changes in Pregnant Women :

Pregnancy is a unique and demanding period in a woman's life. The physical stress of parenting and caring is a female dominant task, daily repetitive stress from tasks that require feeding and lifting the child can compromise the spinal integrity. As the pregnant women proceeds from the first trimester to the third trimester, postural adaptations can be noted.
Neck pain is the most common problem in primary health care and it contributes significantly to individual suffering. Neck pain and its related disability cause an important socioeconomic burden to society. It is the second largest causes of time off work, after low back pain. Neck pain may arise from the muscle, joints, tendons, soft tissue, bones, neural tissue, periosteum, ligaments. The exact origin is typically difficult to identify. There is no consistent clinical classification system for neck pain or cervical pain in literature.

Hence considering all the above views firstly this study intended to find out neck pain characteristics in pregnant women and secondly to examine that pregnancy related postural changes in cervical and thoracic spine.

AIMS AND OBJECTIVES

1. To assess the cervical and thoracic postural angles of prepartum women with neck pain
2. To assess the cervical and thoracic postural angles of postpartum women with neck pain.
3. To compare the cervical and thoracic postural angles in pre-partum women without neck pain.

4. To compare the cervical and thoracic postural angles in postpartum women without neck pain.
5. To asses and document the cervical and thoracic postural angles in nulliparous, prima gravid and multi gravid women.

METHODOLOGY

STUDY DESIGN:

Case-control Study Design

SOURCE OF DATA: As part of the study the pre partum, postpartum and nulliparous women were taken references from various Gynaecologists, Hospitals, other private clinics, subjects were assessed for study at   Vaagdevi College of Physiotherapy and Rehabilitation Clinic attached to Vaagdevi college of Physiotherapy.

The subjects were divided into the following groups:

1. Prepartum women with neck pain
2. Postpartum women with neck pain
3. Prepartum women without neck pain
4. Postpartum women without neck pain
5. Nulliparous women

SAMPLING PROCEDURE:

The study was carried out with purposive sampling method. All women who met the selection criteria were invited to participate in the study. A sample of 160 samples of prepartum, postpartum and nulliparous women who came to the Vaagdevi Physiotherapy and Rehabilitation Clinic were recruited for the study. A group of 40 nulliparous women without any complaint of neck pain were taken as control group. A group of 40 prepartum women and 40 postpartum moments with and without neck pain were taken as the experimental group for the study. A written consent (approved by ethical committee of the Vaagdevi College of Physiotherapy) was obtained stating voluntary acceptance by the subject to participate in our study.

Inclusion criteria:

- Nulliparous women,No history of cervical trauma, No pregnancy till date
- Pregnant women in the 3r trimester of pregnancy (7h, 8th, 9th month)
- Postpartum women those within less than one year after delivery

Exclusion Criteria:

- Congenital deformities, Recent surgeries, History of injury to the spine
- Cervical radiculopathies, Decreased range of motion in the neck

Data Collection Tools:

- Neck pain questionnaire
- Nikon Coolpix S8100 Digital Camera (resolution - 12 megapixel)
- IMAGEJ software (Image Processing and Analysis in Java)
- Pen
- Chair
- Anatomical markers (fluorescent skin markers with tape on one side)
- Plumb lime

Procedure:
Experimental phase:

Once the Neck Pain questionnaire was filledin, the subject was taken inside a lab. Here a plumb line which was priorly setup with a help of a stand. The subjects were instructed to remove their footwear and positioned in front of the plumb line. The starting position was standardized by placing the subjects in an upright posture, which was defined as a vertical pelvic position with an assumption of lumbar lordosis and thoracic kyphosis and the subjects were asked to maintain that position while gazing at a picture in front of them.

Postural analysis:

Cervical angle: It is the angle between a horizontal line through the spinous process of C7and a line from spinous process of C7 through the tragus of the ear.

Thoracic angle: It is the angle between a horizontal line through the spinous process ofT7 anda line from spinous process of T7 through the tragus of the ear.

Cervical and thoracic posture was measured from a lateral view photograph taken with a Nikon Coolpix S8100 digital camera (resolution-12 mega pixel) positioned on a tripod at a distance of 0.8m. The axis of the lens of the camera was placed orthogonal to the sagittal plane of the patient at a height that corresponded with the seventh cervical vertebrae. Anatomical markers were positioned on the tragus of the ear, the spinous process of the seventh cervical and seventh thoracic vertebrae.

Image J Software 1.14:

This is free downloaded software from rsb.info.nih.gov/ij which runs in Linux, Mac OSX and Windows in both 32-bit and 64-bit modes. Image J and its Java source code are freely available to public domain and no license in required. It measures angles, area, length, mean, standard deviation, min and max of selection or entire image and uses real world measurement units such as millimetres. This creates rectangular, elliptical or irregular rare selections. Creates line, point selections. Edits, selects and automatically creates them using the wand tool. Draws fill, clear, filter or measure selections. Saves selections are transfer them to other images.

The photograph of subjects was made into a file and this file was directly copied into the Image J software for analysis. The angle of forward neck posture was measured from a line drawn from the tragus of the ear to the seventh cervical vertebrae; the software produced a horizontal line perpendicular to the vertical plum line captured in the back.

Thoracic posture was calculated as the angle between the horizontal line from the seventh thoracic spinous process and the line drawn from the tragus of the ear. The angle was given by the software along with X and Y axis. This was taken and the correlation in between all the groups was done for the cervical and thoracic vertebrae.

RESULTS

Table 5.1: Demographic characteristics of total 120 nulliparous women, Prepartum women with neck pain, Prepartum women without neck pain, postpartum women with neck pain, post partum women without neck pain.

GROUP	Age(years)			Height (cm)			Education		
	M	SD	SEM	M	SD	SEM	M	SD	SEM
NULLIPAROUS	22.4	1.75	0.2	137.3	7.49	1.1	4.0	.00	.00
PREPARTUM WITH N-PAIN	24.90	2.57	0.5	138.03	6.65	1.4	3.3	0.8	0.1
PREPARTUM WO N-PAIN	24.38	2.56	0.4	137.6	6.27	1.4	3.3	0.7	0.1
POSTPARTUM WITH N-PAIN	25.7	2.66	0.5	138.07	6.99	1.4	3.4	0.7	0.1
POSTPARTUM WO N-PAIN	25.89	2.99	0.6	138.02	6.84	1.4	3.4	0.7	0.1

Weight present (kgs)			Weight before pregnancy(kgs)			Weight at delivery(kgs)			Marriage age (years)		
M	SD	SEM	M	SD	SEM	M	SD	SEM	M	SD	SEM
53.1	7.7	1.2	-	-	-	-	-	-	-	-	-
57.4	3.3	0.7	53.7	53.7	0.7	-	-	-	20.9	1.7	0.4
54.8	4.5	1.0	51.1	4.0	1.0				20.8	1.8	0.4
57.0	4.1	0.8	52.5	11.0	0.7	59.4	3.8	0.7	21.0	1.9	0.3
57.4	6.3	1.4	54.5	5.2	1.2	58.5	6.0	1.3	21.5	1.7	0.3

Table 5.I shows the demographic details of all the 120 women who participated in the study. It includes:
1. Nulliparous women with a mean age of 22.4(SD-1.75 and SEM-0.2) and mean height and weight of the women 137.3cm (SD-7.49. SEM-1.1) and 53.1 kgs (SD-7.7, SEM-1.2)
2. Pre-partum with neck pain with a mean age of 24.90(SD-2.57. SEM-0.5) mean height of the women 138.03cm (SD-63. SEM1.4) and mean of weight at present and before delivery57.4kgs (SD-3.3, SEM-0.7) and 53.7kgs (SD-3.2, SEM-0.7).20
3. Prepartum without neck pain with a mean age of 24.38(SD-2.56, SEM-0.4) mean height of the women 137.6cm (SD-6.27. SEM-S4) mean of weight at present and before delivery54.8kgs (SD-4.5, SEM-1.0) and 51.1 kgs (SD-4.3, SEM 1.0).
4. Post-partum with neck pain with a mean age of 25.7(SD-2.86, SEM-0.5) mean height of the women138.0cm (SD-6.99, SEM-1.4) and mean weight at present, before delivery and after delivery 57.0kgs (SD-4.1, SEM-0.8), 52.5kgs (SD-11.0, SEM-0.7) and 59.4kgs (SD3.8. SEM-0.7).

5. Post-partum without neck pain with a mean age of 25.89(SD-2.99, SEM-0.6) mean height of the women 138.02cm (SD-6.84. SEM-1.4) and mean of weight at present, before delivery and after delivery 57.4kgs(SD-6.3, SEM-1.4), 54.5kgs(SD-5.2, SEM-1.2) and58.5kgs(SD-6.0.SEM-1.3) respectively.

Table 5.2: Chi-square test analysis to find out association between prevalence of Neck Pain in different groups of women.

		Groups								Total	
		Prepartum with neck pain		Prepartum without neckpain		Postpartum with neck pain		Postpartum without neck pain			
		number	%	number	%	number	%	number	%	number	%
neck pain	No	0	.0%	18	100%	0	.0%	19	100%	37	46.3%
	Yes	20	100%	0	.0%	23	100%	0	.0%	43	53.8%

Table 5.2 shows the first question in the questionnaire which was used as a deciding factor to find out the number of prepartum and postpartum women suffering from neck pain compare to those who are not. The prevalence of neck pain in prepartum and postpartum women is 53.8%(43/80) and the prevalence of prepartum and postpartum women without neck pain is 46.3% (37/80).
Table 5.3: Prevalence of Neck pain course in different groups of women using Chi-square test analysis.

		Groups				Total	
		Prepartum with neck pain		Postpartum with neck pain			
		number	%	number	%	number	%
Neck pain course	1.00	3	15.0	4	17.4	7	16.3
	2.00	2	10.0	2	8.7	4	9.3
	3.00	1	5.0	1	4.3	2	4.7
	4.00	8	40.0	6	26.1	14	32.6
	5.00	1	5.0	3	13.0	4	9.3
	6.00	1	5.0	1	4.3	2	4.7
	7.00	1	5.0	2	8.7	3	7.0
	8.00	1	5.0	4	17.4	5	11.6
	9.00	2	10.0	0	0.0	2	4.7

Table 5.3 shows the prevalence of the neck pain course which is present in different groups of prepartum and postpartum women. There is significance in the prepartum and postpartum group women who 40.0% and 26.1% in both the groups who complained of neck pain due to posture.
Table 5.4 Correlation of the cervical and thoracic angle in between all the groups of women.

	CERVICAL ANGLE (DEGREES)				THORACIC ANGLE (DEGREES)				CORRELATION		
	MEAN	SD	95% CI FOR MEAN		MEAN	SD	95% CI FOR MEAN		R	P	N
			lower bound	upper bound			lower bound	upper bound			
Nulliparous	53.3	5.81	51.53	55.25	54.8	4.33	53.4	56.1	0.571	0.000	40
Prepartum with neck pain	47.0	5.86	44.3	49.7	52.2	3.59	50.5	53.9	0.604	0.005	20
Prepartum without neck pain	50.4	4.12	48.3	52.4	53.2	3.60	51.4	55.0	0.560	0.016	18
Postpartum with neck pain	51.	5.67	48.7	53.6	55.6	3.45	54.1	57.1	0.609	0.002	23

Postpartum without neck pain	50.8	7.71	47.1	54.5	55.1	4.42	52.9	57.2	0.868	0.000	19

Table 5.4 shows the significant correlation of cervical and thoracic angles in between nulliparous women, prepartum with neck pain and without neck pain, postpartum with neck pain and without neck pain, p=0.000, 0.005, 0.016, 0.002, 0.000 and r = 0.571, 0.604, 0.560, 0.609, 0.868 respectively.

Table 5.5: The difference of cervical and thoracic angles in between all the groups of women using One way ANOVA.

Table 5.5 Tukey's post hoc analysis to find the pair wise comparisons between groups for cervical and thoracic angles.

		F	SIGNIFICANCE LEVEL
CERVICAL ANGLE	BETWEEN GROUPS	3.90	0.005
THORACIC ANGLE	BETWEEN GROUPS	2.67	0.036

DISCUSSION

Pregnancy is the most unique and demanding period of a women's life. A pregnant women progresses from the first trimester to the third there are many changes in the biomechanical, physiological systems of the body which are mainly influenced by the changes in the mechanical, circulatory, hormonal and psychological factors. Three observers were involved in data collection and validated questionnaire were used along with Image J software for measuring the neck pain and postural changes in the cervical and thoracic spine .The results are as follows:

Base line characteristics:

The demographic details (variables) included in this study were age, height, weight during delivery, weight after delivery, weight at present, marriage age. The variables were compared to the groups i.e. nulliparous women, prepartum women with neck pain, prepartum women without neck pain, postpartum women with neck pain, postpartum women without neck pain were included. The mean of the age of women involved in the study differed in each group as a particular age limit was not taken into consideration The mean height is around 138,07 in between the groups.

Postural Angles:

There is significant difference in cervical angle between nulliparous and prepartum with neck pain (p=0.001). There is significant difference in thoracic angle in between prepartum women with neck pain and postpartum with neck pain (p=0.046).

CONCLUSION

This study concludes that physiological changes and pregnancy alters neck and are consistent with our results showing significant difference between nulli parous women, prepartum women with and without neck pain and postpartum women with and without neck pain for cervical and thoracic angles. But these changes in the postural angles may not be consistent with the neck pain symptoms.

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PROBLEMS AND PROSPECTS OF FRUITS AND VEGETABLES MARKETING IN INDIA

Dr.Akhileshwar Kumar Singh

District Program Manager , District AIDS Prevention and Control Unit
Sadar Hospital Campus , Dist. Araria,Bihar

Abstract:

India's diverse climate ensures availability of all varieties of fresh fruits & vegetables. It ranks second in fruits and vegetables production in the world, after China. As per National Horticulture Database published by National Horticulture Board, during 2015-16, India produced 90.2 million metric tonnes of fruits and 169.1 million metric tonnes of vegetables. The area under cultivation of fruits stood at 6.3 million hectares while vegetables were cultivated at 10.1 million hectares.

Amongst fruits, the country ranks first in production of Bananas (25.7%), Papayas (43.6%) and Mangoes (including mangosteens and guavas) (40.4%). As per the report, the total horticulture productionin the country is estimatedto be313.85 million tonnes which is 0.69% higher than the horticulture productionof311.71 million tonnes in 2017-18.The area under horticulture crops hasincreased to 25.49 million hectares in 2018-19 from 25.43 million hectares in 2017-18. Marketing of horticultural crops is quite complex and risky due to the perishable nature of the produce, seasonal production and bulkiness. The spectrum of prices from producer to consumer, which is an outcome of demand and supply of transactions between various intermediaries at different levels in the marketing system, is also unique for fruits.

Key words: fruits & vegetables. Horticulture cultivation

Introduction:

India is the world's largest producer of many fresh fruits and vegetables, milk, major spices, fresh meat, few fibrous crops such as jute, several staples such as millets, castor oil seed etc. and ranked amongst the world's five largest producers of over 80% agricultural produce items, including many cash crops such as coffee and cotton. India produced around 81.285 MT fruits and 162.187 MTs of vegetables which accounts for nearly 14.0% of country's share in the world production of vegetables. In India the horticulture sector encompasses a wide range of crops e.g., fruit crops, vegetables crops, potato and tuber crops, ornamental crops, medicinal and aromatic crops, spices and plantation crops. It also provides wide opportunities for sustaining large number of agro based industries which generate substantial employment opportunities. The horticulture sector contributes 2 about 24.5% of the agricultural GDP from about 8% of the cultivable area in our country.

Horticulture crops cover large varieties of fruits and vegetables, flowers, plantation, spice crops, medicinal and aromatic plants, roots and tuber crops. Fruits are man"s oldest food. Fruit cultivation is as old as human civilization itself. Cultivation of

fruit is a very important factor contributing to the prosperity of Nation. Fruits and vegetables are the prime source of vitamins and minerals without which human body cannot maintain proper health to resist the diseases. Indian Council of Medical Research (ICMR) had recommended the consumption of at least 92 grams of fruits per day, but per capita consumption of fruits in India is only 46 grams per day. This indicates that there is wide gap between use and requirement of fruits in our country. The major fruit crops grown in India are mango, banana, citrus, grapes, guava, papaya, sapota, pomegranate, jack, anole etc. India is endowed with different agro-climatic condition which offers immense scope for cultivation of various kinds of fruit crops. This provides an excellent platform for the country to emerge as a leading producer of fruit crops. The fruit crops have established their credibility by improving the economic condition of farmers and entrepreneurs, enhancing exports and above all, providing nutritional security to people. This has assumed special significance in the context of liberalized global economy and establishment of World Trade Organization (WTO). India ranks second in the world next only 3 to China with respect to fruit production having a global share of 12 per cent.

India's diverse climate ensures availability of all varieties of fresh fruits & vegetables. It ranks second in fruits and vegetables production in the world, after China. As per National Horticulture Database published by National Horticulture Board, during 2015-16, India produced 90.2 million metric tonnes of fruits and 169.1 million metric tonnes of vegetables. The area under cultivation of fruits stood at 6.3 million hectares while vegetables were cultivated at 10.1 million hectares. India is the largest producer of ginger and okra amongst vegetables and ranks second in production of potatoes, onions, cauliflowers, brinjal, Cabbages, etc. Amongst fruits, the country ranks first in production of Bananas (25.7%), Papayas (43.6%) and Mangoes (including mangosteens and guavas) (40.4%). As per the report, the total horticulture productionin the country is estimatedto be313.85 million tonnes which is 0.69% higher than the horticulture productionof311.71 million tonnes in 2017-18.The area under horticulture crops hasincreased to 25.49 million hectares in 2018-19 from 25.43 million hectares in 2017-18.

The vast production base offers India tremendous opportunities for export. During 2019-20, India exported fruits and vegetables worth Rs. 9,182.88 crores/ 1,277.38 USD Millions which comprised of fruits worth Rs. 4,832.81 crores/ 668.75 USD Millions and vegetables worth Rs. 4,350.13 crores/ 608.48 USD Millions. Grapes, Pomegranates, Mangoes , Bananas, Oranges account for larger portion of fruits exported from the country while Onions, Mixed Vegetables, Potatoes, Tomatoes, and Green Chilly contribute largely to the vegetable export basket. The major destinations for Indian fruits and vegetables are Bangladesh, UAE, Netherland, Nepal, Malaysia, UK, Sri Lanka, Oman and Qatar.

Although, more than 70 types of vegetables are grown in our country, higher emphasis is given to more popular vegetables like tomato, brinjal, chilli, cauliflower, cabbage, peas, potatoes, onions and few common cucurbits and leafy vegetables. These also generate high income and employment, particularly for small farmers. Among the vegetables, potato is cultivated over large area followed by onion, tomato and brinjal whereas, in the case of production potato ranks first followed by tomato, onion and

brinjal. Though India has lot many positives in the vegetable production and marketing sector, it has several disadvantages too. The country lacks an efficient supply chain for the distribution of the fruits and vegetables.

Though India's share in the global market is still nearly 1% only, there is increasing acceptance of horticulture produce from the country. This has occurred due to concurrent developments in the areas of state-of-the-art cold chain infrastructure and quality assurance measures. Apart from large investment pumped in by the private sector, public sector has also taken initiatives and with APEDA's assistance several Centers for Perishable Cargoes and integrated post harvest handling facilities have been set up in the country. Capacity building initiatives at the farmers, processors and exporters' levels has also contributed towards this effort.

Review of Literature:

A brief review of empirical studies on the horticulture crops in India.

Hemambara, H. S. and Mr. Yogesh, M. S (2014) In the study on "Production and Marketing Problems of Papaya growers in North Karnataka" Papaya is considered one of 25 the most important fruits. Production in India has increased significantly within the last few years, and is chiefly responsible for the noticeable growth in global papaya production. The second major problem faced by the global papaya industry is significant post-harvest losses along the marketing chain.

Saurav Negi and Neeraj Anand (2015) In the study of "Issues and Challenges in the Supply Chain of Fruits & Vegetables Sector in India: A Review " observed that there is an improper supply chain management, lack of cold chain infrastructure and Food Processing units which are leading to maximum inefficiencies and resulting to losses and wastage of Fruits and Vegetables. The 26 entire supply chain of F&V is laden with the issue of post-harvest losses and wastages due to long and fragmented chain, dependency on intermediaries, poor road infrastructure, inefficient Mandi system, inadequate cold chain infrastructure facilities, high cost of packaging, poor quality of distribution, weak link in supply chain etc. which resulting to poor price realization of growers on one hand and exorbitant prices paid by consumers on the other end. Highly inefficient supply chain and cold chain infrastructure is the major impediment in the path of speedy growth of agriculture sector in India.

Rais M and Sheoran A (2015) Study on "Scope of Supply Chain Management in Fruits and Vegetables in India" and rightly observed that there is a colossal waste during the post-harvest storage and handling due to improper bagging without crating, lack of temperature controlled vehicles, no cold chain facilities for preserving the produce, coupled with significant processing of the agricultural produce resulting in enormous losses to the nation. Given the characteristics of fruits and vegetables such as perish ability, seasonality, bulkiness and delicate nature of 27 the products coupled with inadequate storage and transport facilities, the supply chain can be made efficient by reducing the length of the chain improving cold chain facilities. The supply chain management in vegetables has to be improved in all the stages of the supply by adopting global best practices in storage, packaging, handling, transportation, value added service etc. And also by disintermediation and participation of organized players i.e., modern supply chain with a view to benefit both farmers as well as ultimate consumers.

DebajitMisra and Sudip Ghosh (2016) In the study of "Growth and export status of Indian floriculture: A review" observed that the production and trade of Indian floricultural products have been constantly increasing over the last decade. Though India dominates in terms of area under cultivation compared with some leading countries which are quite prosperous in floriculture like the Netherlands, Colombia, Ecuador and Belgium, India"s yield per hectare is low. As a result, India"s contribution to the global floricultural export market is very least amount. However, in order to become sustainable, new strategies should be followed, which can give fruitful results on long-term basis.

Methodology:

The method used in this paper is descriptive-evaluative method. The study is mainly review based. It is purely supported by secondary source of data, i.e. books, journals, papers and articles and internet.

Indian Scenario of Fruits and Vegetables Production:

In India per capita availability of fruits and vegetables is quite lowbecause of postharvest losses which account for about 25% to 30% ofproduction. The projected domestic demand of fruitsand vegetables in India for the years 2010, 2015 and 2020 with 2010 as base year. Besides, quality of a sizable quantity of produce also deteriorates by the time it reaches the consumer. Most of the problems relating to the marketing of fruits and vegetables can be traced to their perishability. Perishability is responsible for high marketing costs, market gluts, price fluctuations and other similar problems. There is a rise of about 4% in the production of fruits and vegetables but there is significant increase in production area also which results in low per hectare production. The total production of various fruits and vegetables in different states of India along with the area of production in the year 2015-16. The major horticulture crops producing states of India with their percentage share in total production increases west Bengal (12.6%), Andhra Pradesh (9.7%), Uttar Pradesh (9.7%) Tamilnadu (9.4%), Bihar (7.7%), Karnataka (7.4%), Gujarat (7.3%), Maharashtra (7.3%), Orissa (4.3%), Kerala (4.2%), Madhya Pradesh (3.2%), Chhattisgarh (2.5%), Haryana (3.1%), Punjab (2.1%) Assam (2.1%) Jharkhand (2.0%), Jammu and Kashmir (1.6%), Himachal Pradesh(1.05%) and Rajasthan (1.0%). Other states /UTs namely Uttarkhand, Tripura, Meghalaya, Manipur, Delhi, Mizoram etc. share less than one percent (each) in production in the country. The states having largest area under horticulture crops with their percent share include Maharashtra (11.39%) followed by Andhrapradesh (8.86%), Karnataka (8.55%), west Bengal (7.61%), Gujarat (6.33%), Uttar Pradesh (6.21%), Tamilnadu (6.06%), Orissa (5.53%) and Bihar (5.29%). Other states and Union Territories namely Rajasthan, Madhya Pradesh, Chhattisgarh, Assam etc., share less than 5 percent area under horticulture crops in the Country. The states which have highest productivity in horticultural crops in the country are Punjab (18.8%), West Bengal (17.4%), Uttar Pradesh (17.18%), Tamilnadu (17.13%), Bihar (16.07%), Lakshadweep (15.80%), Jharkhand (14.75%). Delhi (14.22), Chandigarh(14.00%) and Tripura (13.05%).

This phenomenon is caused due to various factors in which economic and technological factors lead the race. State needs to educate the producers of the latest technology available and also help them by granting support to acquire them and proper

supply chain management should be there in the country which would help prevention of exploitation of farmers and help increase their income.

Marketing of Fruits and Vegetables

Marketing of horticultural crops is quite complex and risky due to the perishable nature of the produce, seasonal production and bulkiness. The spectrum of prices from producer to consumer, which is an outcome of demand and supply of transactions between various intermediaries at different levels in the marketing system, is also unique for fruits. Moreover, the marketing arrangements at different stages also play an important role in price levels at various stages viz. from farm gate to the ultimate user. These features make the marketing system of fruits to differ from other agricultural commodities, particularly in providing time, form and space utilities. While the market infrastructure is better developed for food grains, fruits and vegetables markets are not that well developed and markets are congested and unhygienic.

Table:1
Fruit and Vegetable Export summary for financial year 2020-21)

PRODUCT	Quantity	Value
FLORICULTURE		
Fruits & Vegetables Seeds	2,274.03	18,403.95
Floriculture	2,101.78	9,353.29
Total	4,375.81	27,757.24
FRESH FRUITS & VEGETABLES		
Fresh Onions	6,80,897.99	1,18,091.73
Other Fresh Fruits	1,06,277.07	43,024.17
Other Fresh Vegetables	1,18,845.05	40,007.35
Fresh Grapes	32,321.09	32,810.40
Others (Betel Leaves & Nuts)	591.84	1,501.98
Walnuts	169.37	642.60
Total	9,39,102.41	2,36,078.23

Source: DGCIS Annual Export

Problem in marketing :

Majority of the farmers expressed high commission charges as the one of the major problem in marketing. The commission agents charged 10 per cent of the commission from the producer, which ultimately reduces the producer's net price. Another major problem was lack of availability of market. The latest market information is not available to the producer and he will not knowabout daily price fluctuations in the market. As there is no adequate storage facility for the fruit the farmer has to sell the produce as soon as possible before it get spoiled. Due to this reason the farmer some times are forced to sell the produce at lower price. Other marketing problems were price fluctuations and lack of skilled laborers for packing.

- Horticulture does not enjoy a safety net like the Minimum Support Price (MSP) for foodgrains.

- Lack of good cold chain storage and transport networks to extend the life of perishable products.
- Very less or limited input by machinery and equipment so it is tough to minimise the time restraints.
- Higher input costs than foodgrainsmake it a difficult set up, especially when there is no support from the local governments to the smaller farmers.
- It gets challenging for marginal farmers to cope with the high price fluctuations.
- Limited availability of market intelligence, mainly for exports makes it a tougher option to choose.

SUGGESTIONS:

On the basis of the study, the following suggestions are recorded to make horticultural crops to be more effective and purposeful in development of the farming community:

- The growth rate analysis indicated that the augment in production was due to area, rather than productivity, which calls for exhaustive efforts to improve the productivity of horticultural crops .
- Since farmers have expressed virus attack as the main problem, there is a need to develop integrated Pest Management System.
- Post Harvest Management Techniques such as grading, packing, storage, transportation, marketing etc., should be encouraged for maximizing the profits of the farmers.
- It is observed that probability studies should be conducted for creating marketing infrastructure, setting up of processing units, cold storages, transportation system etc., for raw and processed horticultural products.
- The promotional activities required to be taken up through mass media for encouraging the consumption of Horticultural products as protective food.
- There is a need to stimulate private investment in the fields of infrastructure, marketing and research and development and also in production sector to guarantee the availability of produce to well organised processing and export units of Horticultural products.
- Since horticulture sector is highly technology driven, it will be an essential to upgrade the skills of the farmers, field functionaries as well as entrepreneurs.
- Since the present credit system is not only costly but inefficient, inadequate and untimely, there is a need for efficient credit support system to encourage more investment in order to increase production.
- International standard packing materials should be made available for maintaining quality and freshness of vegetables and fruits.
- Continuous market research programmes should be conducted for improving the demand for Horticultural Crops in the International Market.
- Achieve technology led development in Horticulture.
- Post harvest& value addition in horticulture crops.
- Modified atmosphere packaging for long storability & transportation of fruits & vegetables.
- Insect pollinators for improving productivity and quality of the crops.
- Development of varieties for cultivation in non-traditional areas.

- Nutrient dynamics and interaction.
- Bioenergy and solid waste utilisation to make horticulture more efficient and eco-friendly.
- **Plan, coordinate and monitor R&D programmes** at national level as well as to serve as knowledge repository in Horticulture sector.

Way Forward:

- The diversification in the agricultural sector mainly of the horticulture sector has become **a** major source of positive growth for the sector itself and for the nation.
- It has emerged as a promising source ofincome acceleration, employment generation, poverty alleviation and export promotion.
- India can emerge as a far bigger producer and exporter ifsufficient emphasis is given to resource allocation, infrastructure development, more R&D, technological upgradation and better policy frameworkfor horticulture sector**.**
- Horticulture sector withstrong forward and backward linkagesas an organised industry can stimulate and sustain growth.

Conclusion:

There is a colossal waste during the post-harvest storage and handling due to improper bagging without crating, lack of temperature controlled vehicles, no cold chain facilities for preserving the produce, coupled with significant processing of the agricultural produce resulting in enormous losses to the nation. Given the characteristics of fruits and vegetables such as perishability, seasonality, bulkiness and delicate nature of the products coupled with inadequate storage and transport facilities, the supply chain can be made efficient by reducing the length of the chain improving cold chain facilities. All these initiatives will ensure consistency in supply

and provide recorded and demonstrated traceability of products will benefit the farmers with good remunerative price and consumers with good quality produce and also will reduce the losses incurred due to poor post-harvest management and thereby ensuring adequate supply to the consumers. Creation of proper fruit and vegetable supply chain system will link together farmers, vegetable vendors, farmer's self-help

groups and women vegetable/fruits vendors ensuring the availability of quality produce at competitive price to consumers at a convenient time and place.

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A STUDY ON HOSTEL GRAFFITI

Anurekha Choudhury
Assam

About Graffitti:

The earliest form of graffiti date back to 30,000 BCE in form of prehistoric cave paintings and pictograph using tool such as animal bones and pigments. This illustrations were often placed in ceremonial and sacred locations inside the caves. The image drawn on walls showed showed scenes of animal wildlife and hunting expedition in most circumstances. This form of graffiti is subject to disagreement considering it is likely that numbers of prehistoric society endorsed the creation of these illustrations. Cave painting are earliest form of graffiti said by some scholar. On walls long by have been able to write. In Roman period this writing was first called as graffiti.

The word came from the Greek word "Graphein" – meaning is "to write". This word is one form of Italian word "graffito". This means scrateching. In ancient time graffiti was carved on walls with a charp object, although sometime chalk or coal were used.

Graffiti is use to mean any wall writing or picture or symbol or making of any surface without the permission of property owners. Subject of Graffiti depond on writers motivation. Through graffiti a man can express on different topic, current events, political issues etc., uses of graffiti have evolved to include graphics applied to surfaces in a manner that constitutes – "Vandalism" which is punishable by law. But from the ancient time till today graffiti done by people.

In modern contest spray point and marker became the most commonly used material for graffiti writer.

According to several scholars, like – Killing Tobin said that "There are many reasons as to why people use graffiti. For some people it to get back at a world that has long oppressed them and to rebel against the society they consider. For other it is purely for the pleasure of creation. Though graffiti a person can express his or her fears, hopes, dreams and weakness and can understand their mental state.

At first graffiti writing is started at Africa and America. But now both male and female from all religions, nationalities are associated with Graffiti. In present time graffiti are found in many places – public places, walls, schools, College, Public latrine and bathroom etc.

Now a days graffiti can be seen is magazines and internet also. One type of graffiti seen in any American lavatory, restroom walls. That was a new form of graffiti. Late Alan Dundes proposed the term 'Latrinalia' for the new style of graffiti. He used the term in 1966 in an article – ' here I sit' – A study of American Latrinalia – which article are include in his book – "Analytical Essay on Folklore".

At present time, like "Latrinalia one type of graffiti found to be seen in college or University hostels (both boys and girls'). In any hostel the border write down their different views, feelings etc. write with some sentences, lines, poem, picture or symbols i.e. drawing on walls, doors of their rooms. This type of graffiti is an image enable to

create meaning and communication massages to countless individuals generation by generation. According to borders of Hostel graffiti is one kind of massages.

Categories of Graffiti:

There are many style found for graffiti making. There are written on any surface, like – public places, street walls, bathrooms school – college walls etc. some people write their name on any surface. Everyone have their own writing style. Form and style and the way of sayings graffiti can be classified is many categories. Jason Woodward cited steward in his article, "How do read graffiti" where streetart put forward five classifications –

1. Agnomical
2. Amorous
3. The absence, erotic and scatological.
4. Intellectual, limericks, folk wisdom.
5. Political, rdigious or social.

From the above agnominal graffiti is the most common of all form of graffiti. It reflect the first names, nicknames, coded identities etc. This graffiti mostly seen is school desk, walls, back of bus, now a days in historical some places.

Amorous graffiti describes work that ranges farm name carved in a tree to a condified notes.

The third category is a categorical definition which is self depending. So it is to the same of forth and fifth. All one self depending.

Susam Phillips is an anthropologist identified two types of graffiti – Popular and community based graffiti.

Susan Phillips defines popular graffiti as every present \popular graffiti' – the everyday stuff, the witty community, reads, folk epigraphy, Dundeslatrinali' etc. This type of graffiti generally written in national language so that everyone can understand. This ngraffiti mostly seen in bathrooms, walls, streets walls, or in college campus.

Community based \graffiti is that graffiti which are generally viewed as a nuisance to common citizens. It appeared in vicissitude of remote occasions.

Folklore and graffiti:

It is important to note out that like folklore studies functions was first applied by William Bascom. He put forwarded four functions of Folklore. Folklore reveals man's frustrations and psychological escape from the taboos and repression which society impose upon the individuals. Folklore plays an important role in validating Culture. It plays a major role in giving education., particularly in non-literate societies.

Actuallythrough out the world folklore provides a medium for the transmission of knowledge, values and attitudes from generations to another and there contribution on the Community of culture. Every genre of Folklore has its own function. Functions of Folklore genre cannot be analysed until and unless with the help of Field work. Without understanding the context, functions of a genre cannot be analysised.

Like all the genre of folklore, graffiti has also its own functions. First role of graffiti is it reveals man's frustration, mental status, without field work study of graffiti cannot be completed.

Graffiti as a genre of Folklore:

Folklore emerged a new field of learning in 19th Century in England. The Grimm brothers Jacok and Wilhelm Grimm is used a term to donate this new subject as 'Volkskunde.'

Folklore is a very much part of our life. It provides enjoyment and aesthetic pleasure. It is not of the past only but also of the present. It is so deeply rooted in individual and collective behavior of human being that is little or no part in our conscious behavior which is not influenced by Folklore. Human beings are living in the world of folklore transmitted by their forefathers. The study of Folklore is like a meeting ground of the past and present generation. In the development of individuals and society the role played by folklore is very important. The life of human being is moulded, guided, enriched and made up by the accumulation of the past experience of number of community. According to Boas "Folklore is the mirror of culture," (Buscome: 1965:47). It is possible because of folklore, to see a culture form inside of outside. Folklore is still historical science and at the sometime it is a social fact and also a product of social process.

Whatever the preliterate people, the peasantry or masses learn to experience during their struggle against nature are mostly in oral form. One of the very purpose of these lore was to educate future generation. And these have been transmitted to very next generation as guided principle, sometimes through tales, proverbs and riddles and sometime if necessary rhymes are also used. In today's date 'graffiti' which is a genre of oral literature is also use to guide. According to Dundis "Folklore is used primarily as a means of communication that it needs to be studied. Yet this is virtually impossible within the mistake emphasis in Folklore upon the lore rather then upon the folk." (Dundis 1978:51).

That mean a genre can be understood in its cultural context. Each of every folklore genre is related with a specific, time, place or group of people or community and through each genre a communication can be made.

Like other genre of oral literature graffiti is also used as a means of communication and in case of graffiti authors are unknown. Contemporary folklorist have observed that this is a very dynamic and living genre of folklore. Graffiti is regarded as a genre of folklore because of its traditional, doggerel verse form that reappear generation after generation. Secondly the canonicity of graffiti writers is one characteristic which place graffiti in the preview of folklore.

Thirdly graffiti can be considered as a genre of folklore because published graffiti were primarily for entertainment reasons, which records many important things otherwise they might be lost.

Finally graffiti is associated with distinctive folk groups. Ringing from the habitual of various University buildings to socialy deviant group such as gangs of various ethnic groups. It is such a genre of folklore which can be use to advice, transmitted, fillings, knowledge to next generation.

Hostel Boarder as a folk Group:

Guwahati is the center point of higher education. There are so many Govt. and private educational organization. Cotton College (Now University) is one of best college for education among India. The College have hostel facilities. Actually both Govt. and private organization keep hostel facilities. Many of student came here for higher education and stay in both Govt. and Private hostels.

Border of hostels came from different Community, they have different language, religion and custom. So hostel border have to use a common language which is mixture of different language mainly Hindi, English mixed with local language (Assamese). Through non-directive interview it was known that the common language of hostel is known as "hostel language". Some word of this language are slang word, some are code word, only hostel border can understand those words. Some word used by hostel boarder which are not in dictionary, like-Kamor, Be, Aabbe, etc.

Hostel borders have some common problems, one of among is money problem. Always border share their problems among themselves. In any a hostel borders are come from high class, middle class or low class family. Except high class families student, middle class and poor class students mainly face monely problem. Some borders get only a l8ittle amount of rupees for one single month to spend as hostel dues and pocket money. These types of students are very careful about money. Sometimes hostel border make. 'adda' (kind of get together to enjoy the particular time). They share different feelings with others. Sometime they adviceon different matters from their senior. Actually they live in hostel like as one family.

According to Alan Dundes – The term 'folk' can refer to any group of people when so ever who share at least one common factor. It does not matter what the linking factor is it could be a common occupation, language or religion, but what is important is that a group formed for whatsoever person will have some tradition which it calls its own. There is a group must consist of at least two people, but generally most groups consists of many individuals. A numbers, but he will probably known the common core of traditions belonging to the group, traditions which help the group to have a sense of group identity (Dundes, 1965, P:2). Form Dundes'sdeffination is knows that a groups may be as large as a Nation or as small a family or a small group consists of some (more then two in theoretically) individuals. So one group considered as a folk group, when there must be some common factors and similarities among the member of that particular group.

Hostel borders have some common factors. Their main similarities are that all they are stay in hostel for reading, earning knowledge. Among hostel border their most common factor which is very emotional and heart touching is that all of them have to stay for away from their own homes. Most of them have a maintain their relationship by phone only. When they want they cannot go home because of their classes and some of them for money problem. Another common factor is that hostel border makes 'Adda' on any topic .It may be educational, pertional, political, several etc. According to hostel border –"Without 'adda' their life is uncompleted. Hostel borders spend their other time busy with reading, making adds, playing some

favorite games etc. Alan Dundes says- A group of people is regarded as a folk group when they share at least a common factor. From this point – "the group of hostel boarder can be called as a folk group".

Hostel Boarder and Graffiti:

Hostel boarders for away their own family for a long time. At that time they face many problem but no guardian to advice them. So hostel boarders share their problem among them. So hostel boarders share their problem among themselves. Take advice from their senior they share their different feelings of love, emotion, imagination, joy, happiness etc, with themselves. They also express their feelings , emotions picture or symbol drawing on walls , doors of rooms of the hostel where they live.

These type of wall writing are known as hostel graffiti. The phenomenon of making graffiti at first till it remains unknown. Every human being have hope to keep their name forever, from this point of view it can be said that at first hostel border keep their name for other, and some of them keep massages started. It is also notable that some graffiti markers write down their own name on the bottom of the graffiti in small size, some of them does not mention their own name. Hostel border when see a graffiti, then they feel proud about their senior ex-borders .Through graffiti they can remember their ex-senior or border. They like to keep the graffiti in the walls forever. Hostel border says that authority strictly orders not to write down on walls, because of most of hostel are repaired and colored, so border changed their style of writing graffiti .So they write on paper and paste them on walls.

These type graffiti are mostly common in university and cotton girls' hostels (through visiting those hostels). But boys hostel are somehow keep the graffiti writing practice. One of private girls hostel in Panbazar (Rajabala Das Girls Hostel) is full of graffiti.

But till now graffiti culture spread among hostel border generation to generation. In a hostel all hostel border does not make graffiti, some of active border done those. From this way this type of writing culture becomes a tradition. Actually graffiti is a massage to other borders.

Different types of graffiti are found in hostel some are with bright color with picture or symbols, and some are without picture or symbol.

Finally it is proved that hostel border express their different feeling of emotion, happiness, loneliness, soreness etc, through graffiti. They also express their different view of life, love, political matters also. Graffiti is a kind of message among hostel borders. Some common graffiti found in girls' and boys' hostel like – please knock at the door'(boys' and girls' hostel), 'remove your shouse before entering the room'(both), Do not knock like a mad'(boys'), 'I love you' ' you are my heart with male and female abstract figure common in P.G. and degree boys' hostel of cotton college . Read and you can successes; 'don't disturb us during study hour'- are common in girl's hostel, but not rare in boys' hostel also .

After studying about graffiti it can be reach at the point the hostel border are stay like as a folk group, and graffiti are like a massage to articulate their view and feeling.

Borders felling through graffiti:

Borders of hostel express their different feelings through graffiti. From this point of view although graffiti as a massage it can be classified in some subcategory. The main feeling reflect through graffiti is love. Love is an important subject of folklore genre. Other genre of folklore is influenced by love, it may be folksongs, myth, legend and other form, No one can give problem definition of love. It is a devotional feeling.

With the growth of world, when the people know themselves, understand them they fall in love each other, when people were not literate they express their feelings of love singing song mainly. In today world literate people use many medium to reveal this kind of feelings by writing poem, novel, saying, singing song, by painting and other .But those people (student) who lives in hostel they can easily use wall, door, and window of their hostel for express their feeling of love by writing some lines, drawing pictures and symbol. These types of writings are common in government and private both girls' and boys' hostel. These types of writings are knows as hostel graffiti.

The concept of love is very deep feelings among boys' and girls' hostel borders. Love is one chapter of their life, which chapter is sometime open and sometime closed for other. They feel deferent feelings about love.

Observation method brought into focus that both border of girls' and boys' hostel disclose their different feelings about love, by drawing some picture or symbol on wall with some lines. Some common lines written on wall like – 'I love you', you are my heart', along with a rose, symbol of heart(sometime broken heart), brunches of flower or with a abstruse figure (male or female) . It is some kind of messages, which communicate their feeling generation to generation.

These kind of love graffiti can thematically categories in some division like-
1. Emotional love graffiti.
2. Loneliness or sadness of love.
3. Madliness of love.
4. Feeling of deeplove.

1. Emotional love graffiti are poetic in structure and reveal different emotional shades of mind. Anyone can distribute such kind of graffiti, since most of them are comeform anonymous writer and a few mentioned their name. It is one of character of graffiti. Like-Tears are more truthful then smile, because one can smile in front of everyone, but one will cry only infront of one who is special for them.

These graffiti is symbol of deep feeling about love. Some unknown border wrote those lines. Border of hostel chose any easy medium. Graffiti making are one kind of easy medium to express any of feelings of hostel border.
2. Lonlyness or sadness graffiti articulate sadness or lonlyness of love. Sometimes love bring lonelyness to human being, which is a part of love. Graffiti reveal border feelings of these kinds of feelings.
Example found from cotton boys hostel –

> If you don't love me
> Please don't hate me
> If you are not near me
> Please don't go far away
> I cannot without you, please come soon to me (wur)

3. Feeling of deeplove found in many hostel like- "UR someone 4 the world, but UR the world 4 someone."(You are someone for the world, but you are the world for someone).

Most of writings show that both boy and girls border followed different types or ways to express their feelings of love. Love is almighty power, which gives us different kind of feelings at different times. Various kind of feeling of love reveal through graffiti, which are found in both girls and boys hostel. Many dimention of love like- Loneliness or sadness, nothingness, futility emotion, trust on love express through graffiti. Some symbol or drawing of love, like – a red rose or branches or rose, symbol of heart or Brocken heart or male or female figure.

According to hostel border –

"Heart and rose are symbol of love, red rose means true love. Figure, which are with graffiti, those are symbol of border's lover of beloved."

One question was arrived in mind why border make love graffiti in their room? After interviewing them it came into light that – they are for away from their own home, own relatives for a long time. At that they may face many problem, but no one near to advice them, that time friend helps them. They can share their emotion feelings etc. with friend. But sometime they feel lonely then they do graffiti to express their feelings for someone very special.

Graffiti making depend on writer, what their motive is. It is mentioned in above that graffiti is use to mean in any wall writings or picture or symbols, making of any surface without the permission of property owner. Different kind of graffiti found with different issues, which can be seen anywhere in wall, display board, in school, college's room, bathroom, latrine, restroom etc.

The observation brought new face of graffiti that through graffiti not only love massages be expressed in a beautiful and touching way but other issues are also disclosed.

At hostel who started the phenomenon of graffiti writings no one can identified the first person. Various types of graffiti found in hostels. Love graffiti is famous in hostel borders. Love is holy power for them. Other lines or sentences also seen in hostel walls are structurally similar to poem or song to some extent. From fourteen hostels more hundred lives are collected, which are written mainly in English and Assamese. Some similar lines are found like – "Remove your shoes before enter the room.", 'Please knock at the door" – Through interview with border it was known that they use these lines to give advice or order. Some lines related to wish, jock, sentiment, remembrance etc.

Some other graffiti also found in visited hostels. Love graffiti is major in number but other graffiti are not so few. Among those collected graffiti some are written down with their classification –

(a) Reflection of life:
>   Life is very beautiful, you just try to enjoy each day of your life.
>   Life is a long journey, leave a trial of admises.

(b) Remembrance or sentiment:
>   Dare not to sleep in our without remembering us.
>   Bestest of best Rommate.

(c) Advice or order:
>   Rule your passion.
>   Be selent it you have to talk use word, that ar more powerful then silent.
>   Don't peep inside.

(d) Wish:
>   Read and u can success.
>   Nothing is impossible, 2 the man who can win, and then do, this is the low of success.

(e) Jock:
>   I was born intelligent, education punished me.
>   Keep less, give more – only party, party, party.

(f) Other:
>   Some other lines are collected from hostels, which have different meanings. Some like –
>   Success after failure, is very delicious.
>   Time stays long enough for anyone who will use it.
>   I am the master of my own soul.
>   Graffiti can easily attract the people. Aobstracted and well defined graffiti can express many things which cannot be explain through would. So student use graffiti as an easy medium to express their feelings.

(g) Graffiti with drawings:
>   In most of visited hostels various kind of graffiti were colleted. Some are only lines, a stanza of a poem or a song without any symbol or pictures. But sometimes some graffti found with a big picture or symbols. Those types of graffiti reflect borders different feelings.
>   Most of border decorate their room door with some picture, symbol or some writings. They also write down their name on doors or on walls. One writing style is common in girls' hostel, like – (someone + someone) Aloka + Bhanita etc. Boys hostels are not poor for this matter.
>   This survey bough into focus that through graffiti one can express different feelings about life, remembrance, advice, wishing, jocking and many others. One most important point came into focus that through graffiti – hostel border can express their different feeling their way of thinking and give advice.

Conclusion:

The word graffiti is came from the Italian word 'graffito', which involves scratching through one layer of pigment to reveal another beneath it. From ancient

time, from the Roman period the process of graffiti making is start. Graffiti is a term use to mean any wall writings or picture or symbol or making of any surface, without the permission of property owners. Subjects of graffiti depend on writer's motivation. Subject deals with different issues. Graffiti reveals man's frustrations – because through graffiti a person can express his inner feelings, which can gave him mental relief. Like folklore, graffiti have some functional role. It is also one kind of folklore genre. From the thematic view graffiti have many categories.

In any hostel graffiti writing is common among hostel border and it spread one batch to other. Generally graffiti are written in local language and also in English (higher in numbers), so that other can understand easily. Hostel border does not know from when this phenomenon is going on, at first who start to write on walls, it remains unknown. Through graffiti of hostel, a border can express their various feelings their psychology also. According to hostel border graffiti are one kind massages communicated batch to batch. Various kind of graffiti was in Assamese and English. Those collected graffiti was classified on the basis of various thematic content. The study of hostel graffiti reveals various aspects of love and different kind of feelings and view of hostel border.

Hostel border live in hostel as a family. As a folk group they share many common nature and elements. All hostel borders stay away from own home, most of them maintain their relationship only by phone. So accept reading border share their feelings and emotion with other border. When they can not explain their feelings and emotions with other then they use graffiti to articulate their feeling and emotions. Some common graffiti found in visited hostel like – 'Donot disturb us', 'Remove your shoes;, 'Keep silent', 'Please knock at the door, etc. Emotional graffiti were categorized as above. Some graffiti were found with some symbol like – a rose, religious symbol, a brocken heart, a love symbol (red hearth) etc. were also commonly found in visited hostels. Through symbol protect hostel border from evil influences, belived by borders. It is notable that only girls' hostel were believed on it, but rare in boys hostel. Symbols draw near graffiti which reveal the meaning of written lines were clearly.

Through analysis the collected data, one thing came into light that graffiti reflect human psychology. The study of graffiti reflect that boys and girls are different in nature. Girl are emotional, boys want to enjoy their life and make life colorful. Girl mostly use emotional graffiti, but some graffiti use by boys were – 'sayings of great man.' Boys border were found mare practical then girl border, by using graffiti it came into focus.

One another thing came into focus that degree level student mostly make graffiti, but P.G. and H.S. Student were make graffiti few in number. Gegree level student are within 19-21 years, the age stage is known as 'tin age'. Tin ager are imaginative, romantic, self-prided, self-respected, etc. They express their all feelings through graffiti., because it is easy medium to express their feelings.

The study of hostel of graffiti as a genre, which have received a little academic attention. Graffiti have different characteristic and nature. The nature of hostel graffiti is to reflect borders various kind of feelings and view on different topic. Among hostel border graffiti are massages communicated one generation to other.

The study of reveals the student border create graffiti large in member. The hostel border constitute folk groups and there is a thematic community there in graffiti. It has been observed also that obscenity is almost absent among the girls hostel. Graffiti writer also expresses world view. The poetic qualities of graffities are remarkable.

Graffiti has various dimentions like – text and drawings. The study contents that different aspect of a expressive dimensions of graffiti is observed in the sample of own study.

Visited hostels were-
Cotton Girls' Hostel (Degree and PG)
Cotton Boys' Hostel
SMA, SNBC, MNDP, Third Mech,
G.U. (Girls – R.CC – 3), (Boys – research hostel)

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THE STUDY OF THE RELATIONSHIP BETWEEN UNIVERSITY OF FACULTIES JOB STRESS AND ORGANIZATIONAL COMMITMENT IN KABUL

Abdul Ghani Fetrat Aimaq
Assistant Professor in the Department of History &
Faculty of Education, Samangan University, Afghanistan

Abstract

With the global evolution of knowledge competition, university faculties play an important role in the development of knowledge and technology in colleges and universities, and multiple job responsibilities made the faculty's job suffering from more demanding and stressful. University faculties are the backbone of the university, and a high faculty turnover rate has detrimental effects on the development of the university. This research obtains 209 questionnaires from university faculties of Kabul province, and the relationship among job stress, job satisfaction, job engagement, and organizational commitment is analyzed by the structural equation model system. The results show that the job stress of the university faculties has a positive direct effect on job satisfaction, but also has a negative indirect effect on job satisfaction. Job engagement has a positive direct effect on job satisfaction. All of the job stress, job engagement, and job satisfaction affect organizational commitment, job satisfaction has a positive direct effect, job stress has a positive indirect effect, and job engagement has a positive direct effect indirect effect.

Keywords: University Faculties; Job Stress; Job Engagement; Job Satisfaction; Organizational Commitment.

1. Introduction

Kabul's higher education develops rapidly in recent years, and the number of university faculty is also increasing rapidly. From 2019 to 2020, the number of full-time teachers in higher education increased from 0.532 million to 1.56 million, and the young faculties are 0.9 million, accounting for 57.5%. University young faculties play a more and more important role in higher education and have more responsibilities in the sametime. Under the high-performance pressure environment, the university's young faculties' job satisfaction deserves more attention [1]. The research of university young faculties' job satisfaction has important practical significance, it will drive the faculties forward change, improve the work environment, and the university performance [2]. Also, a high faculty turnover rate has detrimental effects on faculties' organization commitment and the development of the university. Therefore, creating a high-quality work environment is a core element of universities' competitiveness.

Although there are some researches on the relationship between job engagement, job stress, job satisfaction, and organizational commitment [3-7], there are many changes in the domestic higher education environment in recent years. University faculties face many new challenges, and the situation is difficult to be the same as that of foreign countries. Under different economic, cultural, social conditions, these issues are also worthy of more systematic analysis and empirical research in China.

2. Literature Review

2.1 Job stress, job engagement, and job satisfaction

Job stress has attracted much attention in recent years, and the "Effort-Reward Imbalance" model is best able to streamline concepts and interpret the job stress of most occupational groups, such as public health and sociology [8, 9]. German sociologist Johannes Siegrist proposed the theory of "Effort-Reward Imbalance" in the 1990s, which argues that people are seeking to increase their reward and reduce their penalties, and when feedback and punishment are changed, their behavior will change. The effort-reward imbalance theory proposes that when the staffs enter into the organization, they will have money, respect, promotion, work support, and other feedback expectations to the organization, they will assess the feedback expectation and job payout. If the effort and reward cannot be balanced, the original social reciprocity criteria will have a threat and imbalance, and employee psychological contract was destroyed [10]. In the labor market, employees can choose to balance themselves with self-regulation through rational career mobility, and if the job opportunity is scarce, the imbalance and negative pressure will continue [11]. Job satisfaction is the employee's perception of

the particular work environment, the personal work response, and the specific view of the work [12-13]. Researchers apply the "Effort-Reward Imbalance" theory to Chinese medical personnel research and find that is associated with job dissatisfaction [14]. Therefore, for the university faculties, the job stress will affect job satisfaction, we do the following hypothesis.

H1: Job stress has a significant impact on job satisfaction.

Job engagement represents the employee's psychological identity of the work [13], is the personal self-impression [15]. Researchers argue that the lower the job pressure, the higher the degree of job engagement, that is, the negative correlation between job engagement and job stress [16-18]. Bakker found that when an individual felt energy recovery on a working day, the amount of work that day could be regarded as the stress of the individual, and it was positively related to the degree of job engagement [19]. Therefore, the relationship between job stress and job engagement is difficult to judge from the literature, so this study assumes the following hypothesis:

H2: Job stress has a significant impact on job engagement.

Brooke proposes that the high level of employee' job engagement cannot represent there is pleasure in the work, unhappy staff and happy work staff may have the same degree of job engagement [13]. Browns propose the job engagement is an antecedent variable of job satisfaction [20].

H3: Job engagement has a significant impact on job satisfaction.

2.2 Job engagement, job satisfaction, and organizational commitment

Organizational commitment usually refers to the individual's identity and values of the organization, willing to work for the organization, and hope to stay in the organization. In general, individuals with high job engagement tend to have higher organizational commitments and vice versa; but sometimes people can have higher job engagement and lower organizational commitments, or have lower job engagement and but higher organizational commitment [21]. Demerouti shows that there is a significant positive correlation between job engagement and organizational commitment [22]. Dai Ying's research on organizational commitment and job engagement shows that there is a close relationship between the two variables [23].

H4: Job engagement has a significant negative impact on organizational commitment.

Job satisfaction and organizational commitment are important research fields in the management domain. Huang & Hsiao explores the structural equation model of job satisfaction and organizational commitment and finds that their relationship is reciprocally strong [24].

H5: Job satisfaction has a significant positive impact on organizational commitment.

Fig. 1. The theoretical model

3. Research Design

3.1 Data collection and measurement

To ensure the smooth progress of the interview, this study takes the telephone appointment of the college teachers in Kabul City, Kabul Province (under the age of 35). The investigation time is in 2019. In order to ensure the smooth progress of the visit, In mid-October to early December, formal research took one and a half months, a total of 223 questionnaires were distributed. After deleting some invalid questionnaires, 211 valid questionnaires were obtained, and the questionnaire was 93.72% effective. The statistical analysis of the survey sample is shown in the following table:

Table 1. Sample description of statistical analysis

Respondents gender	Frequency	Percentage	Whether has an administrative part-time job	Frequency	Percentage
Male	105	49.8	Yes	71	22.0
Female	106	50.2	No	252	78.0
Age	Frequency	Percentage	Teach age	Frequency	Percentage
28	44	20.9	2years and below	54	25.6
29-32	81	38.4	3-6 years	100	47.4
33-35	86	40.8	6-10 years	57	27.0
Total	211	100.0	Total	211	100.0
Education	Frequency	Percentage	Positional titles;	Frequency	Percentage
Ph.D.	60	28.4	Primary title	14	6.7
Master degree	117	55.5	Middle title	121	57.3
Bachelor degree	34	16.1	Vice-senior Title	76	37.0
Total	211	100.0	Total	211	100.0

The research variables in this paper include job stress, job engagement, job satisfaction, and organizational commitment, using the Likert 5-point scale for measurement. To ensure that the measurement tool meets the reliability and validity criteria, the measurement of each variable will be based on the scale of the relevant literature combined with the specific circumstances of Kabul to adjust and modify the use. The job stress scale is based on the ERI scale established by the theory of feedback imbalance. Job engagement use Kanungo scale [25]. The job satisfaction scale is base on the two-factor theory of the MSQ Minnesota job satisfaction scale. This study uses Porter, Steers &Mowday's organizational commitment scale [26].

3.2 Reliability and validity

Reliability analysis: The Cronbach's α coefficients of each scale are all higher than 0.6, and mostly above 0.7, according to Nunnally[27] on the Cronbach's α coefficient of the critical point of view, the scales have good reliability.

Validity analysis: In this study, AMOS software was used to analyze the main research constructs in this paper, and the standardized factor load of each item was obtained. Then, the AVE value and the CR value can be calculated. Some scholars have pointed out that when the standard factor load of each item is greater than 0.5 and the AVE value of each latent variable is greater than 0.5 and the CR value is greater than 0.7, then the measure of the potential variable has good convergence validity [28]. The results show that the scale used in this study has good convergence validity. All authors must Transfer the Online license before the article can be published. This transfer agreement enables Elsevier to protect the copyrighted material for the authors but does not relinquish the authors' proprietary rights. The copyright transfer covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microfilm, or any other reproductions of similar nature and translations. Authors are responsible for obtaining from the copyright holder permission to reproduce any figures for which copyright exists.

4. Results

For the theoretical model proposed in this paper, the structural equation model is a suitable test tool. The structural equation model can be used to test the interrelationship between potential theoretical variables. For this reason, the structural equation model is a more effective test method for the hypothesis presented in this paper.

4.1 Evaluation of goodness of model

In the evaluation of whether the measurement model and the data are fitted, the main observation parameters of the standard error, T value, standardized residuals, correction index, and a series of your preferred degree of statistics. In this paper, we choose the chi-square free ratio (GFI), the approximate error root mean square (RMSEA), the provincial fidelity goodness index (PGFI), and the province (PNFI), normalized fitting index (NFI), and comparison fitting index (CFI). They include three categories of indices,such as absolute fitting index, relative fitting index, and simple fitting index.

Table 2 Structural Equation Model Results

Index	$\frac{x^2}{df}$	Absolute goodness-of-fit		Simple goodness-of-fit		Add value goodness-of-fit	
		GFI	RMSEA	PNFI	PGFI	NFI	CFI
Evaluation standard	< 3	>0.9	<0.08	>0.5	>0.5	>0.9	>0.9
Results	2.396	0.904	0.079	0.580	0.592	0.906	0.903

4.2 Results of hypothesis testing

Figure 2 is the model results of the work stress, Job Engagement, job satisfaction, and organizational commitment that we have obtained as described above.
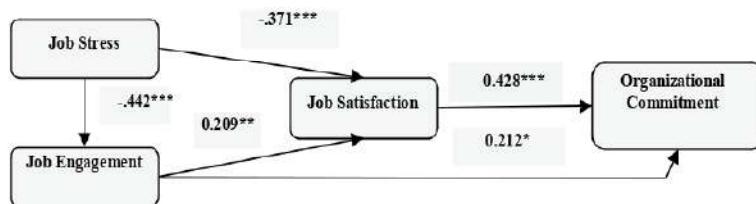
Fig. 2. The result of the structural equation model

Note: *, **, ***, respectively, in the 0.1, 0.05, 0.01 level on the two-tailed test significantly.

It can be seen from the above figure that H1-H5 is tested by significance, but it is also important to note that H3 only has a significance test with a significance level of 0.1, with no significance test with a significance level of 0.05.

Table 3 The direct effect and indirect effects of University faculties' job stress on organizational commitment

Dependent variable	Independent variable	Direct effect	Indirect effect	Total effect
Job Engagement	Job Stress	-.442		-.442
Job Satisfaction	Job Stress	-.413	-.092	-.505
	Job Engagement	0.209		0.209
Organizational Commitment	Job Satisfaction	0.428		0.428
	Job Engagement	0.212	0.190	0.401
	Job Stress		-.132	-.132

Combining Figures 2 and table 3, we obtained the following findings: University faculties' job stress has a significant negative impact on job satisfaction (-505), H1 is established. The job stress has a significant negative impact on job engagement (-.431), that is, H2 is established. The job engagement has a significant positive impact on job satisfaction (0.209), that is, H3 is established. University faculties' job satisfaction has a significant positive impact on organizational commitment (0.428), that is, H4 was established. The university faculties' job engagement has a significant positive impact on organizational commitment (0.401), that is, H5 is established.

5. Conclusion and implication

This research reconstructs the theoretical framework of job stress, job engagement, job satisfaction, and organizational commitment. Specifically, the conclusions of this paper include three aspects: greater job stress in colleges and universities will reduce the job satisfaction of university teachers; the greater job stress in colleges and universities will lead to the reduction of university teachers' job engagement; The higher level of job engagement of university teachers has positive significance for improving their job satisfaction; the higher the degree of job satisfaction of university teachers, the higher the level of organizational commitment.

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काव्यमीमांसायां प्रतिपादिताः पाकभेदाः

(Kavyameemamsayam Pratipaditaha Pakabhedaha)

डॉ.सीहेच्. पवन् कुमारः, संस्कृते अतिथि अध्यापकः, तेलुगु & प्राच्यभाषाविभागः, आचार्य नागार्जुनविश्वविद्यालयः, नागार्जुननगरः, गुण्टूरु, आन्ध्रप्रदेशः,

शोधपत्रसारः

(Abstract)

कविशिक्षासंप्रदायसंचालने महाकवेः राजशेखरस्य सर्वातिशायी वैशिष्ट्यं वर्तते । ध्वनि-रस-अलंकार-रीति-वक्रोक्तिभिन्नं कविशिक्षणनिरतं कार्यमिदं काव्यमीमांसा सर्वथा प्रशंसनीयमेव विशिष्टकार्यसाधकत्वात् । अत्र कस्यापि मतस्य न वा समर्थनं न वा विरोधः । केवलं कविशिक्षणमेवास्य लक्ष्यम् । राजशेखरप्रवर्तितोऽयं कविशिक्षासम्प्रदायः क्षेमेन्द्र - अरिसिंह - अमरचन्द्र - देवेश्वरादिभिः पृथुलतां नीतः ।

एतादृशः महोन्नतकविवरः राजशेखरेण विरचित काव्यमीमांसायां प्रोक्ताः पाकभेदान् यथामति परिशीलनमेव मदीय शोधपत्रस्य प्रधानोद्देश्यः ।

मुख्यांशाः (Key-words)

(1) काव्यमीमांसायाः वैशिष्ट्यम्
(2) पाकस्य चर्चा
(3) पाकभेदाः

आमुखम्

काव्यमीमांसायाः प्रणेता महाकविराजशेखरः बालरामायणप्रस्तावनायां स्वजीवनसम्बन्धे –

"समूर्तो यत्रासीद् गुणगण इवाकालजलदः
सुरानन्दः सोऽपि श्रवणपुटपेयेन वचसा ।
न चान्ये गण्यन्ते तरलकविराजप्रभृतयो
महाभागस्तस्मिन्नयमजनि यायावरकुले ।। "[(1)] इति

यदुक्तवांस्तदाधारेण यायावरवंशेऽस्य जन्माऽऽसीत्, यो वंशोऽकालजलदसुरानन्दतरलकवि-राजादीनां जन्मग्रहणेन गौरवान्वितः कथ्यते । अयं राजशेखरो महाराष्ट्रदेशीयः अकालजलदस्य पौत्रः दर्दुकस्य शीलवत्याश्च पुत्र आसीत् । अयं क्षत्रियचौहानवंशोद्भवाम् अवन्तिसुन्दरीं नाम ललनाम् उपयेमे । इयमवन्तिसुन्दरी महाविदुषी बभूव । राजशेखरः संस्कृतप्राकृतपैशाच्य-पभ्रंशाभिधासु चतसृष्वपि भाषासु निपुणो विद्वानत एव तस्मिन् कविराज इति संज्ञाऽन्वर्था । तन्मतानुसारेणैकाधिक भाषायां सफलकविरेव 'कविराज' इति कथ्यते । बालरामायणगतं 'विद्धि नः षट् प्रबन्धान्' इति वचनमाधारीकृत्य राजशेखरेण षट्ग्रन्था रचिता इति वक्तुं शक्यते- (1) काव्यमीमांसा (2) बालरामायणम् (3) बालभारतम् (4) कर्पूरमञ्जरी (5) विद्धशालभञ्जिका (2)हरिविलासः । एषु प्रथमे पञ्च प्राप्ताः प्रकाशिताश्च । षष्ठस्य हरिविलासस्योद्धरणं हेमचन्द्रेण काव्यानुशासनविवेके दत्तम् । तावतैव तस्य सत्त्वमनुमीयते । एतेषु ग्रन्थेषु काव्यमीमांस समुन्नता ।

(1)   काव्यमीमांसायाः वैशिष्ट्यम्

कविवरराजशेखरेण विरचिता काव्यमीमांसा हि साहित्यविद्याया अष्टादशस्वधिकरणेषु प्रथमेन कविरहस्याख्येन सह सम्बद्धा । तत्र हि प्रथमेन कविरहस्याख्येन सह सम्बद्धा । तत्र हि अष्टादशैवाध्यायाः शास्त्रसंग्रह - शास्त्रनिर्देश - काव्यपुरुषोत्पत्ति - शिष्यप्रतिभा - व्युत्पत्तिकविपाकपदवाक्यविवेक - वाक्यविधि - काकुप्रकार - पाठप्रतिष्ठा - काव्यार्थयोनि -

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1.   द्रः- लोकमणिर्दाहालः - संस्कृतसाहित्येतिहासः - पृ.सं : 177

अर्थानुशासन – कवियर्या – राजचर्या – शब्दार्थहरणोपाय – कविविशेष – कविसमय – देशकालविभाग – भुवनकोशा वर्णिताः क्रमेण । अयं हि ग्रन्थः काव्यविद्यायाः विश्वकोश एव । साहित्यविद्यायाः संक्षेपेण सर्वाङ्गविवेचको ग्रन्थोऽयं सर्वत्र समादृतः ।

(2) पाकस्य चर्चा

काव्यमीमांसायां प्रथमाधिकरणे पञ्चमोऽध्याये राजशेखरेण कवित्वलाभाय प्रतिभा – व्युत्पत्ति – विवेचनक्रमे बहूनां मतानि समुद्धृत्योभयोः आवश्यकता प्रतिपादिता । कविभेदानन्तरं अत्र नवविधस्य काव्यपाकस्य चर्चा अपि दरिदृश्यते । 'पाकं' नाम किम् ? इति विचार्यते चेत् – निरन्तरं पौनः पुन्येन प्रवृत्तिकारणात् पदानामावापोद्धाराभ्यां सन्निवेशेनाभ्यासवशात् कवेर्वाक्यं पाकमाप्नोति ।

<div align="center">"सततमभ्यासवशतः सुकवेः वाक्यं पाकमायाति ।।"[(1)] इति</div>

तत्र पाकं निर्णेतुमाशङ्क्यते – कः पुनरयं पाक? इत्याचार्याणां सन्देहः । परिणामः पाक इति मङ्गलाचार्यस्योत्तरम् । कोऽसौ परिणाम इति प्रश्ने पुनस्तयैवोत्तरम् –

<div align="center">"सुपां तिङां च श्रवः सैव व्युत्पत्तिः ।।"[(2)] इति</div>

सुबन्तानां, तिङन्तानां पदानां श्रवणसुखकरी विशिष्टा उत्पत्तिः एव पाक इति ।

ननु 'व्युत्पत्तिः सुप्तिङां या तु प्रोच्यते सा सुशब्दता' इति सरस्वतीकण्ठाभरणपद्यानुसारं सुशब्दाख्यः गुण एव न तु पाकः, इत्याशङ्क्य समाधत्ते – 'सौशब्द्यमेतदिति' । नायं परिणामः, किन्तु एतत् सौशब्द्यम् ? कस्तर्हि पाकः? पदविन्यासे नाम सुप्तिङन्तरूपस्य निवेशने स्थिरतैव पाकशब्दवाच्य इत्याचार्याणां मतम् । यथाहि –

<div align="center">"आवापोद्धरणे तावद्यावद्दोलायते मनः ।
पदानां स्थापिते स्थैर्ये हन्त सिद्धा सरस्वती ।।"[(3)] इति</div>

सन्दर्भानुकूलपदनिवेशनम् (अवापः), प्रतिकूलपदपरित्यागः (उद्धरणं) एतत् द्वयं तावदेव जायते, यावद् मनो दोलायते एतादृशं पदं प्रयोगयोग्यम्, एतादृशं नेति चाञ्चल्यं भजते । शब्दानां दार्ढ्ये स्थापिते जाते सति, हर्षे वाणी हस्तगता जायते । पदानां परिवर्तनानर्हत्वं पाकः इति पूर्वपक्षस्य फलितार्थः ।

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1. द्रः– राजशेखरः – काव्यमीमांसा – I-5 / पृ.सं : 85.
2. द्रः– राजशेखरः – काव्यमीमांसा – I-5 / पृ.सं : 85.
3. द्रः– राजशेखरः – काव्यमीमांसा – I-5 / पृ.सं : 86.

'आग्रहपरिग्रहादपि पदस्थैर्यव्यवसायस्तस्मात्पदानां परिवृत्तिवैमुख्यं पाकः' इति वामनीयाः पदानां परिवृत्यसहत्वं पाक इति वामनमते फलितम् । यथाहि –

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"यत्पदानि त्यजन्त्येव परिवृत्तिसहिष्णुताम् ।
तं शब्दन्यासनिष्णाताः शब्दपाकं प्रचक्षते ।।"[1] इति

</div>

यत्रबन्धघटकानि पदानि परिवर्तनसहत्वं परित्यजन्त्येव परिवर्तनं नैव सहन्ते, पदपरिवर्तने कृते सति समीहितार्थं नोपस्थापयन्ति । पदानां गुम्फने प्रवीणाः कवयः तं शब्दपाकमिति कथयन्ति । उपर्युक्तवामनमतखण्डनपरां राजशेखरभार्यायाः अवन्तिसुन्दर्या उक्तिं प्रस्तौति यायावरीयः – यत् शब्दः परिवृत्तिं न सहन्ते तत् इयं कवेः अशक्तिरेव, न पाकः । यतः एकस्मिन् पदार्थे महाकवीनां बहुविधोऽपि पाठः परिपाकवान् भवति । पूर्वोक्तहेतोः यत्र रसयोग्यस्य शब्दस्य अर्थस्य सुभाषितानां च निबन्धनं भवति स काव्यपाकः । यदाह –

<div align="center">

"गुणालङ्कार-रीत्युक्ति - शब्दार्थग्रथन - क्रमः ।
स्वदते सुधियां येन वाक्यपाकः स मं प्रति ।।"[2] इति

</div>

स्वाभिमते पाकलक्षणेऽन्येषां सन्मतिमाह, गुणानाम् अलङ्काराणां रीतीनाम् उक्तीनां शब्दानाम् अर्थानां च गुम्फनस्य रचनापरिपाटी येन हेतुना आस्वादयोग्यो भवति, सःमन्यते वाक्यपाकः इत्याशयः । पुनस्तमेव विशिनष्टि –

<div align="center">

"सति वक्तरि सत्यर्थे शब्दे सति रसे सति ।
अस्ति तन्न विना येन परिस्रवति वाङ्मधु ।।"[3] इति

</div>

कवयितरि नूतनोल्लिखिते पतार्थे शब्दे अनुशिष्टे रसे सति साधौ सत्यपि यस्याभावे रचनामाधुर्यम् न स्यन्दते तद् वाक्यपाकनामकं किमपि वस्तु अस्ति इति ।

'कार्यानुमेयतया यत् तच्छब्दनिवेद्यः परं पाकोऽभिधाविषयस्तत् सहृदयप्रसिद्धिसिद्ध एव व्यवहाराङ्गमसौ' इति यायावरगोत्रोद्भवस्य राजशेखरस्यास्ति मतम् ।

(3)   पाकभेदाः

स च कविसमुदायस्य काव्यमभ्यस्यतो नवप्रकारकोऽस्ति ।

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1.   द्रः- वामनः – काव्यालङ्कारसूत्राणि - । / पृ.सं : 22.

2.   द्रः- राजशेखरः – काव्यमीमांसा - ।-5 / पृ.सं : 87.

3.   द्रः- राजशेखरः – काव्यमीमांसा - ।-5 / पृ.सं : 87.

(1) **पिचुमन्दपाकम्** - "तत्राद्यन्तयोरस्वादु पिचुमन्दपाकम् ।।"[(1)] इति ।

नवविधानां पाकानां मध्ये आद्यावस्थायामन्तिमावस्थायां च अमधुरम् पिचुमन्दपाकम् । पिचुमन्दस्य नाम निम्बस्य पाक इव पाको यस्मिन्, यस्य वा तत् पिचुमन्दपाकम् ।

(2) **बदरपाकम्** - "आदावस्वादु परिणामे मध्यमं बदरपाकम् ।।"[(2)] इति ।

आरम्भे चर्व्यमाणम्, अमधुरम्, परिणतौ मध्यमं, बदरस्य पाक इव पाको यस्मिन् तत् बदरपाकम् ।

(3) **मृद्वीकापाकम्** - "आदावस्वादु परिणामे स्वादु मृद्वीकापाकम् ।।"[(3)] इति ।

प्रथमं चर्वणायाम् अमधुरं, परिणतौ स्वादिष्टम्, मृद्वीका पाक इव पाको यस्य तत् मृद्वीकापाकम् । मृद्वीका नाम द्राक्षा एव ।

(4) **वार्ताकपाकम्** - "आदौ मध्यममन्ते चास्वादु वार्ताकपाकम् ।।"[(4)] इति ।

प्रथमं साधारणम्, परिणतौ अमधुरम् वृन्ताकस्य इव पाको यस्मिन् तत् वार्ताकपाकम् ।

(5) **तिन्तिडीकपाकम्** - "आद्यन्तयोर्मध्यमं तिन्तिडीकपाकम् ।।"[(5)] इति ।

आदौ परिणतौ च मध्यमं (साधारणं) स्वाद तिन्तिडीकस्य नाम चुक्रस्य इव पाको यस्य तत् तिन्तिडीकपाकम् ।

(6) **सहकारपाकम्** - "आदौ मध्यममन्ते स्वादु सहकारपाकम् ।।"[(6)] इति ।

आरम्भे साधारणं परिणतौ च मधुरं सहकारस्य नाम आम्रस्य पाक इव पाको यस्य तत् सहकारपाकम् ।

(7) **क्रमुकपाकम्** - "आदावुत्तममन्ते चास्वादु क्रमुकपाकम् ।।"[(7)] इति ।

आरम्भे उत्तमम् परिणतौ च अमधुरं क्रमुकस्य नाम पूगस्य पाक इव पाको यस्य तत् क्रमुकपाकम् ।

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1. द्रः- राजशेखरः - काव्यमीमांसा - I-5 / पृ.सं : 88.
2. द्रः- राजशेखरः - काव्यमीमांसा - I-5 / पृ.सं : 88.
3. द्रः - राजशेखरः - काव्यमीमांसा - I-5 / पृ.सं : 88.
4. द्रः- राजशेखरः - काव्यमीमांसा - I-5 / पृ.सं : 88, 89.
5. द्रः- राजशेखरः - काव्यमीमांसा - I-5 / पृ.सं : 89.
6. द्रः- राजशेखरः - काव्यमीमांसा - I-5 / पृ.सं : 89.
7. द्रः- राजशेखरः - काव्यमीमांसा - I-5 / पृ.सं : 89.

(8)   **त्रपुसपाकम्** – "आदावुत्तममन्ते मध्यमं त्रपुसपाकम् ।।"[1] इति ।

प्रथमम् मनोहरम् अन्ते च साधारणं त्रपुसस्य नाम कर्कट्याः पाक इव पाको यस्य तत् त्रपुसपाकम् ।

(9)   **नारिकेलपाकम्** – "आद्यन्तयोः स्वादु नारिकेलपाकमिति ।।"[2] इति ।

आरम्भे परिणतौ च मधुरं नारिकेलस्य पाक इव पाको यस्य तत् नारिकेलपाकम् ।

पूर्वोक्तानां नवानां त्रिसंख्याकेषु त्रिकेषु गणेषु क्रमेषु पाका विभज्यन्ते । तत्र पिचुमन्द – बदर – मृद्वीकपाकानामेकः त्रिकः, वार्ताक – तिन्तिडीक – सहकारपाकानां द्वितीयः त्रिकः, क्रमुक – त्रपुस – नारिकेलपाकानां तृतीयः क्रमः । एषा नवानां पाकानां मध्ये त्रिष्वपि त्रिकेषु पूर्ववर्तिनः पिचुमन्द – वार्ताक – क्रमुकानां पाकाः हेया अग्राह्याः । एषां पाकानां त्याज्यत्वादेतत्पाकविशिष्टानि काव्यान्यपि त्याज्यानि ज्ञेयानि । तादृशकाव्यकारणं न श्रेयसे न वा लाभाय । अपितु केवलं कीर्तिहानाय । यथा चोक्तम् –

"वरमकविर्न पुनः कुकविः स्यात् । कुकविता हि सोच्छ्वासं मरणम् ।।"[3] इति ।

कवितायाः अनिर्माणं श्रेष्ठम्, किन्तु कुत्सितः कविः नभवेत् । कुकाव्यप्रणयनं हि सजीवं मरणतुल्यम् । यथोक्तं भामहेन –

"नाकवित्वमधर्माय व्याधये दण्डनाय वा ।
कुकवित्वं पुनः साक्षान्मृतिमाहुर्मनीषिणः ।।"[4] इति ।

कुकवित्वं सोच्छ्वासं मरणतुल्यमित्यवधार्य तत्र श्रमो न विधेयः इति राजशेखराशयः ।

द्वितीयत्रिकेषु बदर – तिन्तिडीक – त्रपुसानां पाकाः मध्यमाः प्रोक्ताः । इमे संस्कार्याः । संस्कृत्य च ग्राह्याः । संस्कारो हि विशुद्धिकरणम् । सकलस्य वस्तुनः संस्कारः गुणं वर्द्धयति । यथाहि द्वादशरङ्गविशिष्टं स्वर्णम् अग्निसंस्कारेण विशुद्धं सुवर्णं जायते, तथैव इमे अपि संस्कृताः विशिष्टगुणाः भवन्ति इति यायावरीयाशयः ।

शेषाः प्रतित्रिकमवशिष्टाः अन्तिमाः मृद्वीका – सहकार – नारिकेलां पाकाः यथेच्छं ग्रहणीयाः। किं तेषु त्रिषु संस्कारं नापेक्ष्यते ? इत्याशङ्कायां स्वयमेव समाधत्ते । स्वभावशुद्धं निसर्गविशुद्धं संस्कारं नापेक्षते । मण्यादिषुत्कर्णताधायको यन्त्रविशेषः शाणः मुक्तामणिविशुद्धये न प्रभवति । संस्कारद्वारा मुक्तायां न सौन्दर्यं समागच्छति । असुनिर्भेदः स्पष्टत्वेन प्रतिपत्तिरहितः पाको यस्मिन् तत् अनवस्थितपाक काव्यं कपित्थपाकं कथयन्ति आचार्याः । यथाह भामहः –

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1.   द्रः– राजशेखरः – काव्यमीमांसा – I–5 / पृ.सं : 89.
2.   द्रः– राजशेखरः – काव्यमीमांसा – I–5 / पृ.सं : 89.
3.   द्रः– राजशेखरः – काव्यमीमांसा – I–5 / पृ.सं : 89.
4.   द्रः– भामहः – काव्यालङ्कारः – I / पृ.सं : 15.

> "अह्वद्यमसुनिर्भेदं रसवत्त्वेऽप्यपेशलम् ।
> काव्यं कपित्थमामं यत् केषाञ्चित्सदृशं यथा ।।"[(1)] इति

यथा पलालस्य धूननेन निष्पवनेन वा कदाचित् किञ्चित् अन्नकणमुपलभ्यते तथैव एतस्मिन् कपित्थपाकेऽस्मिन् कदाचित् सुन्दरी सूक्तिः प्राप्येत ।

उपसंहारः

> "सम्यगभ्यस्यतः काव्यं नवधा परिपच्यते ।
> हानोपादानसूत्रेण विभजेत् तद्धि बुद्धिमान् ।।"[(2)] इति ।

सुष्टु अभ्यासं कुर्वतः कवेः काव्यं नवप्रकारैः परिणयाति । पाकमायाति । त्यागग्रहणपरिमाणेन मतिमान् पुरुषः काव्यं विविच्य पृथक् कुर्यात् । अस्वादून् पाकान् परित्यजन् स्वादूंश्च आददीतेति कवेरभिप्रायः । इत्येवंप्रकारेण काव्यमीमांसायां कविरहस्ये प्रथमेऽधिकरणे पञ्चमोऽध्याये काव्यपाकाः - तेषां भेदाश्च राजशेखरमहाकविना सुष्टु निरूपिताः ।

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उपयुक्तग्रन्थसूची

</div>

1. आचार्य लोकमणिर्दाहालः संस्कृतसाहित्येतिहासः कृष्णदास अकादमी
    वाराणसी ।

2. कविराजश्रीराजशेखरः काव्यमीमांसा चौखम्बा सुरभारती
    'विमला' - 'सुधा' - संस्कृत- प्रकाशन्,
    -हिन्दीव्याख्याद्वयोपेता, व्याख्याकारः वाराणसी ।
    डॉ. श्री कृष्णमणित्रिपाठी

3. वामनः काव्यालङ्कारसूत्राणि श्री जयलक्ष्मी
    बालानन्दिन्याख्यया पब्लिकेषन्सु
    आन्ध्रभाषाव्याख्यया समेतानि हैदराबादु ।
    व्याख्यायाः रचयिता
    महामहोपध्याय आचार्य पुल्लेल श्रीरामचन्द्रः

4. भामहः काव्यालङ्कारः संस्कृतभाषा प्रचारसमिति
    बालानन्दिन्याख्यया हैदराबादु ।
    आन्ध्रभाषाव्याख्या समेतः
    व्याख्यायाः रचयिता
    महामहोपाध्यायः डॉ. पुल्लेल श्रीरामचन्द्रः

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1. द्रः- भामहः - काव्यालङ्कारः - V / पृ.संः : 132.
2. द्रः- राजशेखरः - काव्यमीमांसा - I-5 / पृ.संः : 91.

മലബാറിനോട് വിടപറയുമ്പോൾ

ഡോ. എം.എസ് പോൾ

കേരള ചരിത്ര രചയിതാക്കൾ ഏറെ പ്രയോഗിച്ചു കേട്ട പേരാണ് വില്യം ലോഗന്റേത്. മലബാർ മാന്വലുഎഴുതിയ വില്യം ലോഗൻ മലബാറിലെ കളക്ടർ എന്നതിലുപരി ഗുണ്ടർട്ടിനെപ്പോലെയും ബെഞ്ചമിൻ ബെയ്ലിയെപ്പോലെയും കേരളത്തിന്റെ സാംസ്കാരിക ജീവിതവുമായി ഏറെ അലിഞ്ഞു ചേർന്നിരിക്കുന്നു. 1841-ൽ സ്കോട്ട്‌ലാന്റിൽ ജനിച്ച വില്യം ലോഗൻ ഇന്ത്യൻ സിവിൽ സർവ്വീസ് ഉദ്യോഗസ്ഥനായി ഇവി ടെ എത്തുകയായിരുന്നു. മലയാളം, തമിഴ്, തെലുങ്ക് ഭാഷകളിൽ പ്രാവീണ്യമുണ്ടായിരുന്ന ലോഗൻ മല ബാറിന്റെ ജീവിതം കൃത്യമായി മനസ്സിലാക്കി. മലബാറിന്റെ സാമ്പത്തിക പുരോഗതി, ജന്മി കുടിയാൻ സമ്പ്രദായം, കാർഷിക സമ്പദ് വ്യവസ്ഥ, മരുമക്കത്തായം എന്നീ വിഷയങ്ങളിൽ ഗൗരവമായ ഇടപെട ൽ നടത്തി. 1887-ൽ പ്രസിദ്ധം ചെയ്ത മലബാർ മാന്വൽ ഇന്നും ആധികാരിക ചരിത്രരേഖയായി പരിഗ ണിക്കുന്നുണ്ട്. അതിനു പിന്നിലുള്ള ഗവേഷണം വിസ്മരിക്കാവുന്നതല്ല. മലബാർ പ്രവിശ്യ, ജനങ്ങൾ, ചരിത്രം, ഭൂമി എന്നിങ്ങനെ മലബാറിന്റെ ചരിത്രവും ഭൂമിശാസ്ത്രവും സംസ്കാരവും ഈ കൃതിയിൽ കടന്നുവരുന്നുണ്ട്. ഈസ്റ്റിന്ത്യ കമ്പനി സർക്കാർ അതതു ജില്ലകളുടെ ചരിത്രത്തെയും സംസ്കാര ത്തെയും ഭരണ സംവിധാനത്തെയും പ്രതിപാദിക്കുന്ന ഗസറ്റിയറും മാന്വലുകളും തയ്യാറാക്കുന്ന പദ്ധതി യുടെ ഭാഗമായാണ് മലബാർ മാന്വൽ പ്രസിധ്വീകരിക്കുന്നത്. പിന്നീടുള്ള ഘട്ടങ്ങളിൽ തിരുവിതാംകൂ റിൽ ഉൾപ്പടെ നിരവധി സ്റ്റേറ്റ് മാന്വലുകൾ പുറത്തുവന്നിട്ടുണ്ട്. 1864-ൽ മലബാറിൽ ഉണ്ടായ മാപ്പിള ല ഹളകളുടെ പശ്ചാത്തലം കാർഷിക പ്രതിസന്ധിയാണെന്ന് ലോഗൻ എഴുതിയിരുന്നു. ഇത് അധികാരിക ളുടെ അപ്രീതിക്ക് കാരണമാവുകയും ഇതേ തുടർന്ന് തന്റെ ഔദ്യോഗിക ജീവിതം അവസാനിപ്പിക്കു കയും ചെയ്യുകയായിരുന്നു ലോഗൻ.

മലബാറിലെ ജീവിതവും ജാതി വ്യവസ്ഥയും കാർഷിക പ്രശ്നങ്ങളും അനുഭവിച്ചറിഞ്ഞ ഭര ണാധികാരി എന്ന നിലയിലാണ് ലോഗൻ വ്യത്യസ്തനാകുന്നത്. മലയാളിയുടെ സംസ്കാരത്തെ മനസ്സി ലാക്കുകയും മതേതര മനോഭാവം പുലർത്തുകയും നവോത്ഥാന മൂല്യങ്ങൾക്കൊപ്പം നിലകൊള്ളുകയും ചെയ്ത അപൂർവ്വം വിദേശികളിലൊരാളായിരുന്നു വില്യം ലോഗൻ. ചരിത്രം നിരാകരിക്കപ്പെടുകയും അസത്യപ്രചാരണത്തിന് സാധ്യത തേടുകയും ചെയ്യുന്ന പുതിയ കാലഘട്ടത്തിൽ ലഭ്യമായ ചരിത്രരേ ഖകളെ ഉപജീവിച്ചുകൊണ്ട് വില്യം ലോഗന്റെ ജീവിതകഥയെഴുതുകയാണ് 'ഗുഡ്ബൈ മലബാർ' എന്ന നോവൽ. നീണ്ട ഇടവേളക്കുശേഷം കെ.ജെ. ബേബി എഴുതുന്ന ഈ നോവൽ ഉത്തര കേരളത്തി ന്റെ കഴിഞ്ഞ നൂറ്റാണ്ടിലെ സാംസ്കാരിക ജീവിതത്തിന്റെ നേർരേഖ കൂടിയാണ്.

ഒരു യാത്രപറച്ചിലിന്റെ കഥയാണ് ഗുഡ്ബൈ മലബാർ. ബ്രിട്ടീഷ് മലബാറിലെ ദീർഘ ദർശിയാ യ ഭരണാധികാരി എന്നതിനപ്പുറം മനുഷ്യസ്നേഹിയായ വില്യം ലോഗനും ജീവകാരുണ്യ പ്രവർത്തന ങ്ങൾ ജീവിതവ്രതമാക്കിയ ആനിയുമാണ് ഈ നോവലിലെ പ്രധാന കഥാപാത്രങ്ങൾ. ചരിത്രത്തെയും ചരിത്രരേഖകളെയും പിന്തുടരുക വഴി പത്തൊമ്പതാം ശതകത്തിനൊടുവിലെ മലബാറിന്റെ ചരിത്രം നോവലിന് വിപുലമായ ഒരു ക്യാൻവാസ് നൽകുന്നു. ശിപായി ലഹളയെന്നറിയപ്പെട്ട 1857-ലെ ഒന്നാം സ്വാതന്ത്ര്യസമരത്തിനു ശേഷം ഇന്ത്യൻ നാഷണൽ കോൺഗ്രസ് രൂപീകൃതമാവുകയും പുതിയൊരു സാമൂഹിക മാറ്റത്തിന് ഇന്ത്യ സജ്ജമാവുകയും ചെയ്ത കാലഘട്ടമാണിത്. പോർച്ചുഗീസ് അധിനിവേശ കാലം മുതൽ മലബാറിന്റെ സാമൂഹിക ജീവിതത്തിലുണ്ടായ സങ്കീർണ്ണതകൾ ഒരു പരിധി വരെ ഈ നോവലിൽ ചർച്ച ചെയ്യുന്നുണ്ട്. മുൻവിധികളോ യജ്ഞമാന വിധേയത്വമോ ഇല്ലാതെ മലബാറിലെ സാ മൂഹിക സാമ്പത്തിക വിഷയങ്ങൾ സത്യസന്ധമായി അവതരിപ്പിക്കുകയായിരുന്നു ലോഗൻ. മതസാമു ദായിക ലഹളകൾക്കു പിന്നിൽ പ്രവർത്തിക്കുന്ന സാമ്പത്തിക ബന്ധങ്ങളെക്കുറിച്ചുള്ള അന്വേഷണമാ യിരുന്നു ഇതിൽ പ്രധാനം. യഥാർത്ഥത്തിൽ ഈ അന്വേഷണമായിരുന്നു മലബാറിൽ നിന്നുതന്നെ ലോ ഗൻ മടങ്ങിപ്പോകാനുള്ള കാരണവും. മലബാറിലെ അടിമകളുടെ നിജസ്ഥിതി വ്യക്തമാക്കുന്ന ഒന്നിലധി കം റിപ്പോർട്ടുകൾ ലോഗൻ സർക്കാരിന് സമർപ്പിക്കുന്നുണ്ട്. മലബാറിൽ വരാനിരിക്കുന്ന ക്ഷാമത്തെ ക്കുറിച്ചുള്ള മുന്നറിയിപ്പുകൾ, കൃത്രിമ ക്ഷാമത്തിന്റെ കാരണം. 1700ലും 1877ലും മലബാറിലുണ്ടായ ക്ഷാമത്തെക്കുറിച്ചുള്ള സൂചനകൾ മതസ്പർദ്ധയും കലാപങ്ങളുമുണ്ടാക്കാൻ പാകത്തിൽ നടക്കുന്ന ഒ റ്റപ്പെട്ട കൊലപാതകങ്ങളുടെയും അക്രമസംഭവങ്ങളുടെയും യഥാർത്ഥ കാരണങ്ങൾ തേടിയുള്ള അന്വേ ഷണങ്ങൾ ഇവയൊക്കെയായിരുന്നു ഭരണകൂടത്തിന് ലോഗനിൽ അതൃപ്തിയുണ്ടാകാൻ കാരണം. മല

ബാർ കലാപത്തെക്കുറിച്ചുള്ള പരാമർശങ്ങൾ ഒഴിവാക്കാൻ ലോഗനോട് സർക്കാർ ആവശ്യപ്പെടുന്നു ണ്ടെങ്കിലും ലോഗൻ അതിന് തയ്യാറാകുന്നില്ല. ആന്ധ്രാപ്രദേശിലെ കടപ്പ ജില്ലയിലെ മജിസ്ട്രേറ്റായി ത രം താഴ്ത്തിക്കൊണ്ടാണ് ലോഗനോട് ഭരണകൂടം പ്രതികരിച്ചത്. സത്യം പറഞ്ഞതിന് ലഭിച്ച സ്ഥാനയിറ ക്കവും സ്ഥല മാറ്റവും ലോഗനെ നിരാശപ്പെടുത്തിയിരിക്കണം. അധികകാലം ഔദ്യോഗിക ജീവിത ത്തിൽ ചെലവഴിക്കാതെ ലോഗൻ സ്വദേശത്തേക്ക് മടങ്ങുകയായിരുന്നു. മലബാറിൽ നിന്നുള്ള ലോഗ ന്റെ പിൻവാങ്ങലും അതിനു പശ്ചാത്തലമായ കാരണങ്ങളുമന്വേഷിക്കുകയാണ് കെ.ജെ ബേബി. ലോഗ ന്റെ ഭാര്യ ആനിയുടെ വാക്കുകളിലൂടെ, ആനി പലർക്കയക്കുന്ന കത്തുകളിലൂടെ പത്തൊമ്പതാം ശതക ത്തിന്റെ അവസാന ദശകങ്ങളെ പുനഃസൃഷ്ടിക്കുകയാണ് നോവലിസ്റ്റ്.

മലബാറിന്റെ ചരിത്രവും കേരളത്തിന്റെ സാംസ്കാരിക ജീവിതവും കൊളോണിയൽ അധിനി വേശ കാലത്തെ ഇന്ത്യാ ചരിത്രവും ഈ നോവലിലുണ്ട്. ലോഗനും ആനിയുമായും ബന്ധപ്പെട്ടവരിലൂ ടെ അവരുടെ ഓർമ്മകളിലൂടെ അക്കാലത്തെ ലോക സംഭവങ്ങൾ നോവലിലേക്ക് കടന്നുവരുന്നു. ലോ ഗന്റെയും ആനിയുടെയും കുടുംബജീവിതവും അവർ മുൻകൈയെടുത്ത് നടപ്പാക്കുന്ന സാമൂഹിക സേവനത്തിന്റെ പരാമർശങ്ങളും ഈ നോവലിന്റെ പ്രധാന നൂലിഴയായി നിൽക്കുമ്പോഴും ചരിത്രത്തി ന്റെ, സാമൂഹിക ജീവിതത്തിന്റെ, മിത്തുകളുടെ, ആചാരരീതികളുടെ, പ്രകൃതിയുടെ ബ്യൂറോക്രസി യുടെ, മലബാറിലെ സസ്യജന്തുജാലങ്ങളുടെ വലിയ വിവരണമായി പന്ത്രണ്ട് അധ്യായങ്ങളുള്ള ഈ നോവൽ പരിണമിക്കുന്നു.

സ്കോട്ട്ലാന്റിൽ ഡെർവിക്ഷെയറിലെ ഫെനികാസിലുള്ള കാർഷിക കുടുംബത്തിൽ ജനിച്ച ലോഗന് മലബാറിലെ കർഷകരുടെ പ്രശ്നങ്ങളെക്കുറിച്ച് വ്യക്തമായ ധാരണയുണ്ടായിരുന്നു. കേരള ത്തിന്റെ കാർഷിക സംസ്കൃതികളെക്കുറിച്ചും കാലാവസ്ഥ മാറ്റത്തെക്കുറിച്ചും നാട്ടറിവുകളിലൂടെ മന സ്സിലാക്കുകയായിരുന്നു ലോഗൻ. ജന്മികുടിയാൻ വ്യവസ്ഥക്ക് പിന്നിൽ നിലനിൽക്കുന്ന സങ്കീർണപ്രശ് നങ്ങൾ കൃഷി, കുടിയേറ്റം, വന്യമൃഗങ്ങളുമായുള്ള നിരന്തര സമരവും സമരസപ്പെടലും ഇവയെല്ലാം മ ലബാറിലെ കാർഷിക സമ്പദ്‌വ്യവസ്ഥയുടെ പിന്നിലെ ഘടകങ്ങളായി ലോഗൻ തിരിച്ചറിഞ്ഞു. വൈദ്യ ശാസ്ത്രപഠനം തുടങ്ങിയെങ്കിലും ലോഗന്റെ ഭാര്യയായി വീട്ടമ്മയായി ജീവിതത്തിന്റെ നല്ലൊരു ഭാഗം കേരളത്തിൽ ചിലവഴിക്കുകയായിരുന്നു ആനി. മലയാളം പഠിക്കുകയും രാമായണകഥ വായിച്ചു കേൾ ക്കുകയും ചെയ്യുന്ന ആനി കേരളത്തിന്റെ സാംസ്കാരിക ജീവിതവുമായി ഗാഢമായ ബന്ധം പുലർ ത്തുന്നുണ്ട്. കല്യാണിയെന്ന പരിചാരികയിൽ നിന്ന് കളരി അഭ്യാസം പഠിക്കുകയും കേരളത്തെപ്പറ്റി കൂ ടുതലറിയാൻ ശ്രമിക്കുകയും ചെയ്യുന്നുണ്ടവർ. ആനിയും എമിലിയും കാറൽ മാർക്സിന്റെ വീട്ടിൽ പോയതും മാർക്സിന്റെ കുടുംബത്തിൽ അവർ നേരിട്ടുകാണുന്ന ദരിദ്രാവസ്ഥയും ഈ നോവലിന്റെ ര ണ്ടാമധ്യായത്തിൽ സൂചിപ്പിക്കുന്നുണ്ട്. 'ഇന്ത്യയിലെ താണ ജാതിക്കാർ' എന്ന് പറയുന്നവർ പോലും ഇ റ്റലിയിലെ ശരാശരി ആളുകളെക്കാൾ എത്രയോ ഉയർന്നവരാണെന്ന ഇറ്റലിയിലെ സോൾട്ടുക്കോവ് രാ ജകുമാരന്റെ വാക്കുകൾ മാർക്സ് പരാമർശിക്കുന്നു. മോശയും അഹറോനും സ്വപ്നം കണ്ട കനാ�ൻ ദേശമായിരുന്നു മാർക്സ് എന്ന ജൂതനും സ്വപ്നം കണ്ടതെന്ന നിരീക്ഷണം ഇതൊക്കെ ആനി എന്ന ക ഥാപാത്രത്തെ അവതരിപ്പിക്കുമ്പോൾ നോവലിസ്റ്റ് കൂട്ടിച്ചേർക്കുന്നുണ്ട്. ആനിയിലെ സോഷ്യലിസ്റ്റായ മനുഷ്യസ്നേഹിയെ അവതരിപ്പിക്കുകയാണിവിടെ. ആനിബസന്റ്, എ. ഓ. ഹ്യൂം എന്നീ വിദേശികളായ മനുഷ്യസ്നേഹികളും നോവലിൽ കടന്നുവരുന്നുണ്ട്. ഇവരുടെ നിരയിലേക്കാണ് ആനി എന്ന കഥാപാ ത്രത്തെയും ഒരു പരിധിവരെ ലോഗനെയും നോവലിസ്റ്റ് കൊണ്ടെത്തിക്കുന്നത്. മലബാർ മാനുവലിന്റെ രചനാകാലവും വിലയും ലോഗന്റെ ഔദ്യോഗികജീവിതത്തിലെ ചില വർഷങ്ങളുമാണ് ഈ നോവലിന്റെ പശ്ചാത്തലം. മതം, ജാതി, മലബാറിലെ കാനേഷുമാരി സംബന്ധിച്ച വിഷയങ്ങൾ, വീടുകളുടെ തച്ചുശാ സ്ത്രം, മലബാറിലെ നാട്ടുമൊഴികൾ എന്നിങ്ങനെ ചരിത്രവും സാംസ്കാരിക ജീവിതവും ഭരണസംവി ധാനങ്ങളും നിയമവാഴ്ചയുമെല്ലാം സൂക്ഷ്മ പഠനത്തിന് വിധേയമാക്കുകയായിരുന്നു ലോഗൻ. മലബാ റിലെ മിത്തുകൾ സാംസ്കാരികചരിത്രം മലബാറിലെ മണ്ണിന്റെ ഘടന വടക്കൻപാട്ടിലെ കഥാപാത്രങ്ങ ളുടെ വീരപരിവേഷം പഴശ്ശി, ടിപ്പു എന്നിവരുടെ ചെറുത്തുനിൽപ്പുകൾ എന്നിവയെല്ലാം ചെറിയൊരു കാലയളവിൽ ലോഗൻ വിശകലനം ചെയ്യുന്നുണ്ട്. ദീർഘവീക്ഷണമുള്ള ഒരു ഭരണാധികാരിയായിട്ടാണ് ടിപ്പുസുൽത്താനെ ലോഗൻ വിലയിരുത്തുന്നത്. ടിപ്പുവിനെ കീഴ്പ്പെടുത്തിയ കമ്പനിപ്പട കടന്നുവന്ന താകട്ടെ അയാൾ വെട്ടിയുണ്ടാക്കിയ വഴിയിലൂടെയും ഇത് ചരിത്രത്തിലെ ചില വൈരുദ്ധ്യങ്ങളിലൊന്നാ യി മാറുന്നു.

അട്ടപ്പാടി സൈലന്റ്‌വാലി താഴ്‌വരക്കേസുകൾ, മലബാറിലെ റീസർവ്വേ തൃക്കാലൂർ സംഭവം, ഏ റനാട് വള്ളുവനാട് താലൂക്കുകളിലെ നിരായുധീകരണ പരിപാടികൾ, മലബാറിലെ അടിമക്കച്ചവടം സം

ബന്ധിച്ച് സർക്കാരിന്റെ ഭാഗത്തു നിന്നുണ്ടയ നിയമനിർമ്മാണം, കനോലി വധവുമായി ബന്ധപ്പെട്ട് നി രവധി മുസ്ലിംകൾ കൂട്ടപ്പിഴയ്ക്ക് വിധേയരായത്, സ്ട്രെയിഞ്ച് കമ്മീഷൻ, ലോഗൻ കമ്മീഷൻ, മാധവ റാവു കമ്മീഷൻ സ്റ്റേ ഓഫ് എക്സിക്യൂഷൻ ബില്ല് ഇതൊക്കെ നോവലിൽ പരാമർശിക്കുന്നുണ്ട്. ചരി ത്രരേഖകളും ലോഗൻ സ്വന്തം നിലയിൽ അന്വേഷിച്ച് മനസിലാക്കിയ മലബാറിന്റെ ചരിത്രവും മലബാർ മാനുവലിലെ പരാമർശങ്ങളും ഇതര ചരിത്രകൃതികളുമാണ് ഈ നോവലിന്റെ ആധാരമായി കെ.ജെ.ബേ ബി സ്വീകരിച്ചിട്ടുള്ളത്. ഉത്തരാധുനിക നോവൽ പൊതുവെ ചരിത്ര വിഷയങ്ങളോടും കലുഷിത (Fictionalized History) സമ്പ്രദായങ്ങളോടും താൽപര്യം പുലർത്തി കാണുന്നുണ്ട്. കഴിഞ്ഞ രണ്ട് നൂ റ്റാണ്ടുകളുടെ ചരിത്രത്തിലൂടെയുള്ള സഞ്ചാരം ഇന്നത്തെ നോവൽ ആഖ്യാതാക്കൾക്ക് ഏറെ പ്രതിസ ന്ധി സൃഷ്ടിക്കുന്നുണ്ട്. ആധികാരികമെന്ന് അംഗീകരിക്കപ്പെട്ട ചരിത്രവും ചിലർ നിഷേധിക്കാനാഗ്രഹി ക്കുന്ന ചരിത്രവിഷയങ്ങളും നോവലിൽ ചർച്ച ചെയ്യുമ്പോൾ പോലും ഒട്ടേറെ വിവാദങ്ങൾക്കിടയുണ്ട്. പത്തൊമ്പതാം നൂറ്റാണ്ടിലും ഇരുപതാം ശതകത്തിന്റെ ആദ്യപകുതിയിലും കേരളത്തിലുണ്ടയ ചരിത്ര രാഷ്ട്രീയ സംഭവങ്ങൾ ഇനിയും ചർച്ച ചെയ്യപ്പെടേണ്ടതുണ്ട്. കേരളത്തിന്റെ തെക്കും വടക്കും നടന്ന മി ഷണറി പ്രവർത്തനത്തിന്റെ പശ്ചാത്തലത്തിൽ യാക്കോബ് രാമവർമ്മന്റെ ജീവിതം പ്രമേയമാക്കി രാമച ന്ദ്രൻ എഴുതിയ 'പാപസ്നാനം' എന്ന നോവൽ ഇത്തരമൊരന്വേഷണമാണ്.

മലബാറിലെ കാർഷിക മേഖലയെക്കുറിച്ചും അടിസ്ഥാന ജനതയുടെ ജീവിതത്തെക്കുറിച്ചും വ്യ ക്തമായ ധാരണയുള്ള എഴുത്തുകാരനാണ് കെ.ജെ ബേബി. അദ്ദേഹത്തിന്റെ മുൻകാല രചനകൾ ഇ ക്കാര്യം വ്യക്തമാക്കുന്നുണ്ട്. മുഖ്യധാരാ ചരിത്രത്തെ മുൻനിർത്തിക്കൊണ്ടു തന്നെയാണ് ഈ നോവലി ന്റെ രചന നിർവ്വഹിച്ചിരിക്കുന്നതെങ്കിലും മാനുവൽകാരനായ വില്ല്യം ലോഗൻ നടത്തിയ സൂക്ഷ്മ ചരി ത്രാന്വേഷണങ്ങളിലൂടെയാണ് നോവലിസ്റ്റ് സഞ്ചരിക്കുന്നത്. വില്ല്യം ലോഗൻ എന്ന ഭരണാധികാരിയു ടെ ദീർഘവീക്ഷണവും വ്യക്തമായ ആസൂത്രണ പദ്ധതികളും ഈ നോവലിലുണ്ട്. കൃഷി വിദ്യാ ഭ്യാസം, പരിസ്ഥിതിയെ മുൻനിർത്തിയുള്ള പ്രവർത്തനങ്ങൾ, ജയിൽ പരിഷ്കരണം, റീസർവേ, വഴിക ളുടെയും റോഡുകളുടെയും നിർമ്മാണം, മികച്ച ആരോഗ്യ സേവനത്തിനു വേണ്ടിയുള്ള ആശുപ ത്രികൾ, തുറമുഖ നിർമ്മാണം, കാലാവസ്ഥാ മാറ്റം മുൻനിർത്തിയുള്ള പദ്ധതികൾ എന്നിവയെല്ലാം ഇതി ന്റെ ഭാഗമാണ്.

ആനിയെയും ലോഗനെയും പ്രധാന കഥാപാത്രങ്ങളാക്കി മലബാറിന്റെ പ്രാകൃത ചരിത്രവും അ ധിനിവേശ ചരിത്രവും ഒരു കഥ പോലെ പറയുകയാണ് കെ.ജെ ബേബി. ചരിത്രരചനാ സന്ദർഭങ്ങളിലും അക്കാദമിക് ചരിത്ര ചർച്ചകളിലും ക്ലാസ്മുറികളിലും കടന്നുവരുന്ന മലബാർ മാനുവലിന്റെ സൃഷ്ടാവി ന്റെ വ്യക്തി ജീവിതത്തിലൂടെ മറ്റൊരു ചരിത്രവിശകലനമാണ് നോവലിസ്റ്റ് നടത്തുന്നത്. അതിലുപരി മ തവിഷയങ്ങളിൽ മാത്രം മുൻനിർത്തി ചർച്ച ചെയ്യുന്ന മലബാറിലെ നിരവധി കലാപങ്ങൾക്കു പിന്നിലെ സാമ്പത്തിക ബന്ധങ്ങളെക്കുറിച്ചുള്ള അന്വേഷണവുമിവിടെയുണ്ട്. വർഗീയ കലാപങ്ങൾക്കു പിന്നിൽ രൂഢമൂലമായിരിക്കുന്ന സാമ്പത്തിക പ്രതിസന്ധിയും ദാരിദ്ര്യവും ഗൗരവമായി ചർച്ച ചെയ്യുന്ന വർത്ത മാനകാലത്ത് കെ.ജെ ബേബിയുടെ ഗുഡ്ബൈ മലബാർ ഏറെ പ്രസക്തമാകുന്നു.

GARMENTS AND ORNAMENTS OF KARBI :A STUDY

Author Name : Jyotirani Das

Department : Assamese

Ex Student : Cotton University, (Assam)

ABSTRACT : The *Karbis* are one of the earliest tribes of North East. They are descendants of the greater *Mongoloid* species. Though the original abode of the *Karbis* and other tribe can't be definitely known. Yet one thing can be said that they migrated to *North East* first through *Patkai* hills. Some scholars attribute that the Karbi tribe is a branch of *Naga Bodo.* On the other hand *Dr. T. C. Sharma* wrote on his book "*North East Indian in Prehistoric Times* " that –"*The Premealithic proto -Australoid population of North East Indian might have been completely dispersed by the immigrant Mongoloid population, as packets of proto -Australoid groups are not to be found among the present population of North East* India". The *Karbis* are known as *MIKIR in* Assam history but they like to introduce themselves as *KARBI* or *ARLENG.* The Karbi life is full of diversities. They observe a number of celebrations with dance and song in a year. Accordingly the Karbi men and women put on various dress items. Though in the early they put on bulk and leaves of trees to covered nudity to get rid of shame The Karbis adopt their own methods to weave their garments.. Their dresses manifest the love of beauty, artistic bent of mind and cultural genius.

. Hence through research paper light is thrown on the dress materials and ornaments of the Karbis.

KEYWORDS :

Karbi , garments , ornaments, society, weaving, culture, colours.

INTRUDUCTION:

The Non Karbis call the indigenous Karbi tribes of Assamas *MIKIR.* The Karbis are at present living in west *Myanmar* and *North Bangladesh* . Even though originally the Karbis live in *Karbi–Anglong*. In addition to this Karbis live in places like *Nagaon, Morgan, Gulaghat, Jorhat, Sonitpur, Kamrup Meghalaya etc.* The Karbis are sub divided into a number of "*GOTRA" (race or family).* This *gotras have* their own stories of origin. Each *gotra* has developed a number of rituals. The Karbis gains the father's lineage inherently and marriage in the same lineage is prohibited.. Karbis observe various worships and festivals. Moreover every

tribes of Assam has their own attire as well as ornaments. They also have national attires and ornaments of their own.

This garments and ornaments throw light on the social and cultural aspects of the karbis.

SCOPE:

Amongst many tribes residing in Assam , Karbis are one of the most prominent tribe.They posses a rich cultural tradition along with language and literature .The Karbi Version of "*RAMAYANA*" as "*SABIN ALUN* " mention worthy in this regard. Like other tribes, Karbis also have their distinct identity of dress and jewelleries. We have indeavoured to discuss the legends, stories and mythology associated with the wearing attire sand jewelleries of the Karbi tribe of Assam.

PURPOSE :

- To briefly discuss various dress and ornaments prevalent in Karbi society.

- To throw light on the different modes of making dresses and ornaments .

- To give a description as how Karbi dress and ornaments gives a special introduction to Karbi life and society .

- To briefly discuss the stories behind wearing cloths .

METHOD:

We have adopted descriptive and analytical method of study for the research work.

THEME:

The verbal literature of the illiterate folk is composed and spread by them is the folk literature of a tribe. This type of literature bears the happiness and sadness, hopes and despair, love and sentiments are expressed through thus type of literatures. The Karbis like to be introduce themselves as "*ARLENG*".This is one of the hilly tribes of The Karbis. Folktales, Legends, Folklore etc. are rich with the folk literature of the Karbis and a beautiful picture of their national life. Depending on the Folklore, Folktale one can know how the Karbis learned to wear dress. There are beautiful stories as to how the Karbi woman in their own "Looms" (*TATKHAL*) prepared dress, and how learned theart of embroidering dress. Gradually the Karbis learned to struggle how to live life.For living they began to learn the art of hunting animals for food. Eventually they came to know how to grow paddy. From the song "*LAKHIKEPLANG*"we came to know that the Karbis used to live on wild products like potato (*Allu*) and taro (*kosu*). The Goddess *LAKHIMI* saw their deplorable plight and came on direction of God to the earth in the form of paddy. The agricultural life of the Karbis had a start when they came to know paddy. Having learnt the art of production the Karbi search the jungle and brought chilly (*Jolokia*), ginger (*Ada*) and cotton (*Kopah*) and began to cultivate them on the hilly lands. The cultivation

is called "*JHOOM FARMING*" .In the songs like "BIRIK KEPLANG", "*HANSOKEPLANG*", one can find the clues of agricultural life of the Karbis .

Gradually with mental developments they felt the need to wear cloth to do away with shame. According to legend the Karbis in the beginning used to wear leaves of cotton tree (*SIMOLU GOS*). The following song bears the proof of this –

"***Ire kathipi marang***

Puru-phandar nangpinkham

Ire sintupi abang

Seleng jengki Nangpinkham (***ansi***)

Karbi tang alon senam."

Saying the deplorable foodless dressless plight of the Karbis the Goddess *LAKHIMI* with the permission of God in heaven descended to earth with her hundred sisters with the help of a golden thread and filled the granaries of the Karbis. Thereafter the Goddesses *LAKHIMI* bestowed them with *KAUPINSOLA* (*RIKONG*) *MEKHELA* and *METHONI* etc. to make the Karbis beautiful. We can find a mind charming story as to the use of cotton by the Karbi from the song "*FELOKEPLANG*". According to belief the Goddess brought cotton seeds to the earth. Most probably came to know the cotton cultivation immediately after they know how to grow paddy A lady weaver named "*SEDANGDI*" found out the way how to spin thread from cotton. Another lady called "RIMSHIPI" made "*LOOM*"'s at home and discovered the art of weaving cloths. Till then they didn't know how to embroider cloths. Time passed on and one day one of the Karbi ladies young lady made colour from roots and leaves of trees, dyed thread and embroidered cloths with the seven colours of rainbow that girl is none other than "*SERDIHUN*" or "*GOLDENDIHUN*". The charming tale of "*DIHUN*"adorned with"*SER*"means gold still runs from mouth to mouth of the *Karbis.* Thus the weaving industry of the *Karbi* weavers with their specimens become known as precious wealth .Through it one can know the dexterity and aesthetic sense if the *Karbi* women. Even the illiterate girls and daughter -in- laws with their own imaginative power and with the help of "*KATHI*" and threads of varied colors brought dreams into dress .The weaving industry of the *Karbis* became an indispensible or unavoidable part of every *karbi* family. Having no means of life the daughters and daughter -in -laws and the widows accepted weaving as the means of living. Thus is seen most *Karbi* families. In addition to dresses of daily use, dresses for specialuse are also woven at home .Thus is still prevalent among the *Karbi* ladies.The knowledge of weaving among the young ladies be it educated or uneducated, has become a glorious part of National life of the Karbis . The Karbi *loom* is called "*PETHERANG*".This is also traditionally known as"*PETHERANG*" ,"*KASIBUR*""*ATHERANG*"It is also known as "*TATKHAL*" fastened around the waist .The tools of the looms are made of bamboo and cane at home. The tools are –"*thening*", "*thepun*", "*uekoso*","*uekopi*","*thelangpong*","*ingthi*","*harpi*","*honthari*","*langpong*",*"barlim*", "*dang*"etc .

To set up the loom the first necessity is for post .These post are posted parallelly and face to face. A bamboo measuring about 5 feet against the front of to posts.The thread along the Length are wrapped around this bamboo. The bamboo is called "THERANG". Another bamboo of the measurement of the therang is also tied to the front posts. According to the measurement of the cloths, a rope is tied from the therang to the other bamboo. This rope is called "THEPUN". Accordingly to the breadth of the cloth to be woven, another bamboo is placed. This bamboo used to draw the clothto woven downwards is called "THENING". , "WEAKOPY" and "THELNAGPONG" is attached to the"THEPUN" in special manner / art. Weaving is started thereafter. *Thepong* and *Thening* removed after weaving. A belt made of cane is tied around the waist to gain strength. This belt is called Thehung. In addition to these tools "INGTHI", "HARPI",,"HONTHARI","LANGPONG","DANG" etc. necessary to complete weaving the clothes. In addition the these tools of bamboo and cane, the Karbi women make colours at home for embroidery. Roots, bulk and leaves are used to make these colours. Blue colour from leaves of "SHIBU" tree, black colour from tender leaves of "HARITAKI" tree, Red colour from "LAR" (sealingwax) and yellow colour from "JARSANGLONG" tree roots are made. Dress and ornaments are cultural elements or part of tribe. A lot of things are expressed through these two things. The dress and ornaments of both karbi men and women the Civility, economic condition, social status, aesthetic sense, artistic mind cultural talent of the karbi men and women are known. They also indicate their age and gender. "SHIRT" or "SULA" is one of the main item of male dress of the Karbis. This shirt is called "SHOI". The shirt with short hands runs up to the waist with the unwoven superfluous end of the warp. Normally one or two lines of embroidery and the unwoven superfluous end of the warp hangs down. The shirts have different name according to their colours and embroidery . Among them the shirts woven for the youth are called "SHOI IK ". That for middle aged people woven with red thread is called "SHOI ANG". The ones for aged peolple woven with red and white thread are called "SHOI MIRI ". In addition to these three ,"SHOI UMS" and "SHOI HANGTHONG" shirts are also in use among all Karbi men. Along with shirts the karbi man put on "SURIYA"thatflows up-to knee. This *SURIYA* of white colour is called "*SATOR*".

Among the Karbi national dresses the"*TURBAN*" buton the head of karbi man deserve special mention. The cloth used as a *turban* is called *POHO*. On both ends of the "*POHO*" varieties of Floral designs are woven. The Karbi women weave all the beauties of their heart into the weaving texture of the "*POHO"*. According to the legend from irresistible feeling of love of the Karbi young lady named "*DIHUN*" this trend of embroidery came down.

Dihun received **"NOLANGPONG"** a bamboo ear ornament from her lover as a present. In return she wove *poho* with her heart contents with embroidery and presented it to her lover. The art of embroidery came into existence since then. Till today emblems of fan, (*bisoni*)tree ,butterfly, birds, elephant and deer are drawn on the *poho*. Pohos in vogue can be divided into "*PHOHOKEOR*", "*POHOKELOK*", "*POHOKEIK*" etc.

On the whole the Karbi men put on only *SATOR* .Sometimes Of course during *jhoom* cultivation they put on *KAUPIN* around their waist when felt necessary This *KAUPIN* of about one foot measurement in breadth is called "*RIKONG*" .The *RIKONG* is also embroidered. The two ends of the RIKONG are hanged down up to the knee. The use of "*RIKONGMANG*" and "*RIKONGBEREMUNG*" are prevalent among the karbi man. Karbi women put on *MEKHEKA* are called "*PINI*". The black colour is very popular to them. Therefore they use black colour in *SHOI* of the men and *PINI* of the women. The karbi women embroider their *MEKHELAS* of seven types with black and white thread and out them on. Among them they weave a *PINI* using black colour made from the "*SHIBU*" tree. No embroidery is applied here. Besides this simple *MEKHELA* they weave *mekhelas* with thread of different colours and embroidery.Among all the seven *PINIS* the moat beautiful *PINI* is "*Marbong Homkri Apini*". In the middle part of this *pini* on both ends models kike flowers exists in triangular manners . This *pini* is prestigious . The *mekhelas* woven with black threads in length and white threads in breadth are called " *pinipajareng*"*Mekhela*with black in length and white in breadth is called"*piniaphidop*". The Karbi women weave a kind of with cotton and *ERI* thread. It is called *pinihomkiraltom.* *Mekhekas* woven with blue in length and black with different samples are called "*pinialli*". Thus is also recognized as a type of prestigious *mekhela.* To hold the *pini Mekhela* tied a belt is worn . This belt is called "*wamkok*". This belt has on its two ends specimens of different flowers.

One of the worth mentioning dresses worn by Karbi lady is "*Pekok*"or a *scarf to* cover their body. This *pekok* is worn over the right shoulder tied to it. According to **manalisha Rongpipi** "*gabhoru, buari aru boyokhostho mohilar babe khukiya khukiya pekok bebohar koratu bansoniyo*".[1] The different types of *pakoks*are "*peseleng*","*peduphirso*", "*pephilai*", "*pemojai*", "*pepakpan*", "*pejangfong*",and "*pesarpi* " etc. *Peseleng* can also be used by Karbi men like "*suriya*"

The Karbi ladies cover their breast with a *methoni* . This *methoni* is known as."*piban*". This *piban* is used by karbi brides at the time of wedding. This *piban* is also used as face cover in *nimsokerung* dance during *Samangkan*a karbi festival. Another cloths similar to a *Piban* is prevalent among the Karbis. This *piban* is also used to carry babies on their backs.

Another dress item is called "*jolonga*" or" *jarong*" is carried by both karbi male and female. There are Varites of *jarong.* The bag used by the karbi women to tie up battle nut

(tamulpan) is called *sui.* To tie up this bag a silver chain is used. According to tradition **sui** is the symbol of the aristocrats. That means only the rich class keep **sui** in their homes. Several other *jarongs* called *jarongmojai, jarongmonajin, jarongmiri* and *jarongkeior* or *jambili*are found to use in karbi society.

Five varieties of scraf called ”*kaseumape* ”used in winter season to cover the body are also found in Karbi society. This cloth of different models is one of the karbi dresses. "*Pekhonjori*" is used in"*doha*" dance. *Kase um ape* in the forms of *pe inglai, pejahu, pe jarbong* etc. also used in karbi society.

Four types of bedsheets to spread over the beds are used in karbi society. Thwy are – "*pelu*" , " *pelulangsang*", "*pelu amar*"and *"peluk", Pelu* is also used at tying up paddy in bundles This bundle of paddy is called "*mentung. Pelu*" is also used as seat cover for bride and bridegrooms to be seated on.

In addition to dresses the both karbi men and women to beautify themselves a variety of cosmetics has been used in since ancient or antiquity time.

In ancient time karbi men used to wear *oyster* and *bamboo earing* on their ears etc. The process of tucking feathers of *bhimraj bird* signify the aesthetic sense of the karbi men.

One of the favorite means of decorating body limbs uses to blacken the teeth. This black thing was made by burning a twig of ”*showik***”** *tree.* A big knife was held over the burning twigs. . It leaves a black layer on the big knife. This layer is a kind of adhesive. This black adhesive is used by the karbi ladies to blacken their teeth. They also used to wear silver ornaments. The ornaments worn around the neck is called *leck . lecks* are of different types. They are *"leckpengkhara,", "leckpengmui" , "leckjengjiri,", "leckkhiki", "leckwaikom", "leckruwe" , "leck pila "and"leckmanduli" e*tc. around their necks.

The bangles worn by the Karbi women are called *roi.* This *rois* are three types. They are *roipengkhara, roitahu and roisetung.*

*Nolangpong*a bamboo made ear ornament worn by the Karbi ladies deserves special mention. The ear ornaments worn by them are called "*jangsai.*""*Nothengpi*" *a jangsai* made of red gem,gold and silver is also used by them.

The Karbi women put on varieties of ring around their fingers. They are "*arnankeoto*", "*arnankelok*", "*rupbonda*", "*serbonda*"etc. The Karbi priest put on"*arnan*"of made of coper.

Karbi woman carries at all time a knife with a small handle. It is called "*nokek*" .It is also made of elephant tusk or buffalo horn. Along with dress and ornaments this *nokek* signifies the aesthetic sense of the Karbi.

The karbi men and women has been wearing ornaments for beautifications. These ornaments and dresses manifest the folk culture of the Karbi.

CONCLUSION :

From the above discussion "Dress and Ornaments of the Karbi Tribe", we get the following conclusion –

- The dress and ornaments of the Karbi tribe throws light on the originality or ingenuity of Karbis .

- Diffferent designs are used in karbi dresses and ornaments and they also used different methods of weaving dresses and ornaments.

- The weaving industries of the Karbis occupy a special place in karbi society.

- In making ornaments and weaving dresses the Karbis use different tools made by themselves.

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GEOLOGICAL STUDIESOFTHE ALKALI SYENITE FROM PULIKONDA, CUDDAPAH DISTRICT, ANDHRA PRADESH

K. David[a], P. Swamy Sharan [a] ,S. Ramesh[b], G. Papanna[a]
[a]Department of Geology, Kakatiya University, Warangal, Telangana
[b]Geological Survey of India, Bhopal, Madhya Pradesh

ABSTRACT

Geological studies on saturated to over-saturated and sub-solvus aegirine-riebeckite syenite body of the Pulikonda syenite pluton has been carried out. The Pulikonda alkali syenite plutonshows moderate fractionation between LREE and HREE as reflected by the enrichment of HREE and moderate enrichment of LREE. The negative Eu anomaly indicates the role of plagioclase fractionation. Three distinct co-eval primary magmas i.e., mafic syenite, felsic syenite and alkali basalt magmas all derived from low degrees of partial melting of mantle differentiates and enriched metasomatised lower crust played a major role in the genesis and emplacement of the syenites into the overlying crust along deep seated regional scale trans-lithospheric strikeslip faults and shear zones. This event took place immediately after the late-Archaean calc-alkaline arc magmatism of different timespace episodes i.e., initially at craton margin and later on into the thickened interior of the Eastern Dharwar Craton. The ductile sheared and folded Pulikonda alkali syenite pluton has evolved dominantly from the magmas derived from partial melting of lower crust and minor juvenile magmas from mantle. Differentiation and fractionation by liquid immiscibility of mafic magma and commingling-mixing of intermediate and felsic magmas followed by fractionational crystallization under extensional tectonics during the waning stages of calc-alkaline arc magmatism nearer to the craton margin were attributed as the main processes for the genesis of Pulikonda alkali syenite pluton.

Geochronological investigation carried out by earlier workers has yielded a six point whole rock isochron age of 1500 ±100 Ma with initial $^{87}Sr/^{86}Sr$ ratio of 0.7085± 0.0047 and MSWD = 2%.The higher initial Sr(i) value for this body suggests metasomatised source. Resetting of Rb-Sr systematics has resulted in getting younger age for Pulikonda alkali syenite body though it is supposed to be older as perthe geological setting and this anomaly is interpreted interms of repeated deformation and reactivation of shear zone, emplacement of alkali granite into Pulikonda syenite pluton and the role of Rudravaram Shear Zone (basement tectonics) in the formation of the Nallamali Fold Belt of the Cuddapah Basin. Alkaline magmatism initially triggered along the micro-plate margin tectonic setting and later confined to the intra-plate tectonic setting.

*Keywords:*Alkalisyenite, Magma mingling and mixing, Eastern Dharwar Craton, Pulikonda, Andhra Pradesh.

INTRODUCTION

The late-Archaean alkaline magmatism is a rare and unique phenomenon known so far only in the Eastern block of Dharwar Craton in the form of a syenite body at Koppal (Chadwicket al, 2001), Karnataka, Peninsular India.It figures as one among such a few rare world occurrences viz. South East of Greenland, Lake Superior Province of Canada and Eastern Gold Field of Yilgarn block of Australia. The Eastern Dharwar Craton is studded with a number of small and a few large aegirine and riebeckite bearing syenite bodies of late-Archaean age, which were

confined to major regional scale deep seated crustal weak zones located to the south of the Cuddapah Basin is as the Pulikonda alkali syenite plutonrespectively. The syenite body wasemplaced prior to the emplacement of Mafic Dyke Swarms. Here an attempt has been made to establish the petrological and geochemical characters of the Pulikonda alkali syenite.

Madhavan et al (1994) identified enrichedalkaline and sub-alkaline nature of alkali riebeckite syenites(Racherla, Idamakallu and Giddaluru) and hedenbergitesyenite (Gundlapalle) respectively intruding into NallamalaiFold Belt of the Cuddapah Basin. Madhavan(2002) classified alkaline provinces of India into CuddapahIntrusive Province, Southern Indian Peninsular Province,Deccan Province, Vindhyan Province, Bastar Province andShillong Province. Mazumder et al (2000) indicated threeepisodes of alkaline magmatism viz. (1) alkaline complexesemplaced at the junction of Eastern Ghats Mobile Belt and Craton(s) at 1600to1200 Ma, (2) alkaline rocks emplacement in SouthernGranulite Terrane around 750 Ma and alkaline dykes ofKanakapura in Southern Karnataka at around 820 Ma and(3) Pan-African Alkaline Magmatic event (~550 Ma) inKerala.

Lassen et al (2000) studied the late-Archaean silicaunder-saturated alkaline bodies of ~2680 Ma old in theWestern Quetico Belt, Superior Province, Ontario, Canada.They are supposed to have formed from the mantle derived melts displayingevidences of magma mingling. Smithies and Champion(1999) have suggested the origin of felsic alkaline intrusiveemplaced in the granite-greenstone terrane of the EasternGold Fields, Yilgarn Craton (~2650 and 2630), WesternAustralia, due to crustal delamination or convectivethinning of a denser garnet-rich lower crust that resultedfrom extraction of earlier voluminous granite magma.Janne Blighert Toft et al (1995) studied the late-Archaean(~2700 Ma old) Skjoldungen Alkaline Igneous Province,South East Greenland wherein alkaline magmas were emplaced intoa ~2800Ma Archaean gneissic basement. The alkalinerocks, showing a coherent geochemistry, were derived from the regional mantle derivedmafic parental magma and they resemble potassic rocksfrom modern arcs. Flux melting of Ocean Island Basalt lithosphere in amantle wedge overlying subduction zone establishedthese late-Archaean alkaline intrusive as one of theearliest manifestations of modern plate-tectonic processes.Four granite magma series were evolved at ~2750 Ma to2670 Ma fromthe Archaean Abitibi Southern Volcanic–Plutonic Zone, the Pontaic Sub-Province, the SuperiorProvince and the Canada (Rui Feng and Rob Kerrich, 1992).Theevolution reflects subduction, magma generation anddifferentiation processes that typify modern arc systemsfollowed by collision. Primitive magmas of the shoshoniticseries may have been derived from low degrees ofpartial melting of a depleted mantle wedge previouslymetasomatised by alkaline rich fluids released from asub-ducting slab.

REGIONAL GEOLOGY

The Archaean granite-greenstone terrane of the Eastern Dharwar Craton represents a calc-alkaline arc granitoid batholith (Chadwicket al, 2000) with accreted segments of intervening narrowlinear greenstone belts of inner-arc type which alongwith intrusive syn-kinematic granitoids accreted on to the western block of the Dharwar Craton. Gopal Reddy andSuresh (1993, 1998 &2004), Suresh et al (1996, 1998, 2003 &2005) and Reddy (1998) identified four magma suites similarto those magmatic series associated with Abitibi greenstone belt i.e., (1) Tonalite-Trondhjemite-Granodiorite GneissSuite (TTG), (2) Tonalite-Granodiorite-Monzogranite (TGM)Suite, (3) Monzogranite-Syenogranite Suite (MS Suite) and(4) Granite and Alkali Feldspar Granite Suite (AFGS) i.e., shearcontrolled post-orogenic granites (Suresh and Rao, 1994) and anorogenic A-type granite suite (Zakaulla et al, 1998&Sarvothaman, 1996). Tonalite-Granodiorite-Monzogranite suite was evolved mainly dueto mingling and mixing of co-eval mafic

and felsic magmasand accompanying fractional crystallization processes incalc-alkaline arc environment.

Greenstone belts were invariably subjected to regionalscale sinistral ductile shearing mostly along their easterncontacts with the granitoids forming major late-Archaeansutures/terrane boundaries in the Eastern Dharwar Craton (Swami Nath et al, 1976& Drury et al, 1984). Important of them are: (1) theeastern margin of the Chitradurga Schist Belt (boundarybetween Western Dharwar Craton and Eastern Dharwar Craton) with the emplacement of theKoppal alkali syenite body, (2) the Hutti-Kolar suture hostingmajor Dancherla alkaline complex, A-type granites and otherminor alkaline bodies, (3) the Rudravaram-Tsundupallisuture associated with the deformed Pulikonda alkali syenite pluton, (4) the Velikonda-Shernawala line separating the Nallamali Fold Belt and the Nellore Schist Belt and (5) Mesoproterozoic suture between the Eastern Dharwar Craton and the Eastern Ghats Mobile Belt comprising Cuddapah Intrusive Province.   The Rudravaram and Velikondashear zones were further reactivated as post-Cuddapahthrusts and between these thrust zones a parallel crustal weakzone was formed within Nallamalai Fold Belt. This isknown as Racherla-Sagileru-Cheyyeru line which was lateroccupied by alkali syenites, lamproites and minorultra-potassic flows (Reddy, 1999). The tectono-magmaticevents of Eastern Dharwar Craton with reference to alkaline magmatism areshown in Table 1.

Table No. 1: Different episodes of the precambrian alkaline magmatism in the Eastern Dharwar Craton, Peninsular India *(modified after* Suresh et al, 2010)

Sl.No.	Episode	Rock Types	Area/ Equivalent
05.	Neoproterozoic alkaline intrusives (~800 Ma)	Alkali Syenites and Lamprophyres	Kanakapura-Harohalli area, Karnataka. Southern central marginal zone of Dharwar Craton (transitional to Southern Granulite Terrane-SGT).
04.	Mesoproterozoic post-Cuddapah alkaline intrusives (~1350-1100 Ma)	Minor Riebeckite Syenites; Nepheline Syenites; major Gabbro-Anorthosites, Lamproites (~1400 Ma), Lamprophyres and Kimberlites (1100 Ma).	Prakasam Alkaline Province (PAP)/Cuddapah Intrusive Province (CIP). Contact zone (Marginal zone) of Dharwar Craton and Eastern Ghats Granulite Belt (EGGB). Lamproites in Nallamalai Fold Belt (NFB). Kimberlite Fields in Craton interior.
	Upper Cuddapah sediments	Minor syn-sedimentary acid to basic and ultra-potassic flows and mafic dykelets	Confined to the Nallamalai Fold Belt (NFB)
	Palaeo to Mesoproterozoic lower Cuddapah sediments (~1800-2000 Ma)	Sediments associated with acid and basic intrusives and flows.	Intra-cratonic Sedimentary Basin in the Eastern Dharwar Craton (EDC)
	Mafic Dyke Swarms (MDS) (~1800-2400 Ma)	Dolerite and Gabbro mafic dykes with minor ultra-mafics, Anorthosites, Granophyres and Alkali Gabbro dykes and basic sub-volcanic varieties.	Within Eastern Dharwar Craton (EDC)
03.	Meso to Palaeoproterozoic pre-Cuddapah alkaline intrusives	Alkali Syenite, Pyroxenite, Gabbro, Anorthosite, Dolerite and Granophyre.	Peddavaduguru Syenite. Interior central part of the Eastern Dharwar Craton

			(EDC).
02.	Palaeoproterozoic alkali intrusives (~2300 Ma)	Alkali Syenite	Syenite bodies of Dancherla, Danduvaripale, Reddypalle etc.; Interiors and central part of the Eastern Dharwar Craton (EDC); Pikkili Nepheline Syenite/Syenite of Southern Granulite Terrane (SGT).
	AFGS-Alkali Feldspar Granite Suite(post-orogenic & anorogenic granitoids) (~2400-2200 Ma)	Granite, Alkali Feldspar Granite Suite (AFGS) and Syenite	Granite, Alkali Feldspar Granite Suite (AFGS) and Syenite craton along boundary of major Granite bodies; Vannedoddi and Yeguvaplli Syenites.
	MS-Monzogranite-Syenogranite suite (~2500-2400 Ma)	Granite, Monzo-Granite and Monzo-Syenite (~ClosepetGranite and Charnockite) and nearer to southern craton marginal area.	Western part of the Eastern Dharwar Craton (EDC).
01.	Late-Archaean alkali syenite intrusives (2500-2400 Ma)	Alkali Syenite and Hornblendite-Diorite (± A-type Granite)	Nearer to western boundary of the Eastern Dharwar Craton-EDC (Koppal Syenite) and nearer to eastern boundary of the Eastern Dharwar Craton-EDC (Pulikonda Syenite).
	TGM-Tonalite-Granodiorite-Monzogranitesuite (~2600-2700 Ma)	Tonalite-Grano-diorite-Monzo-granite (TGM); Micro-granular Mafic Dykes (MMD) and Micro-granular Mafic Enclaves (MME); Hornblendite-Diorite/Appinite; Monzodiorite/Syenite, Lamprophyre and Trondhjemite (remobilized TTG gneisses).	Eastern Dharwar Craton (EDC)
	Dharwar Greenstone Belts (~ 2600-2900 Ma)	Meta-basic and meta-acid volcanics (±minor meta-ultra-mafic flows); meta-sediments, Volcanic Conglomerate, meta-tuff and Banded Iron Formation (BIF).	Eastern Dharwar Craton (EDC)
	TTG-Tonalite-Trondhjemite-Granodiorite Gneisssuite (~3100-2900 Ma)	Older mafic Gneisses and Tonalite-Trondhjemite-Gneisses (TTG), Granulites, high grade meta-pelites, Fuchsite Quartzites etc.	Eastern Dharwar Craton (EDC)

GEOLOGICAL SET-UP OF SYENITE

Pre-granitic, pre-migmatitic, brittle-ductile sheared and folded Pulikonda alkali syenite pluton was emplacednearer to the craton margin along a terrane boundary/suture zone marked by Tsundupalli Schist Belt definingthe eastern accretionary terrane boundary of Eastern Dharwar Craton i.e., Rudravaram Shear Zone (steep easterly dipping) located tothe south of the Cuddapah Basin in Cuddapah andChittoor districts, Andhra Pradesh. The Pulikonda alkali syenite pluton is

composed ofsyenite, alkali granite, albitite and pegmatite. The location and the geological map ofPulikonda alkali syenite body is shown in Figs.1 and 2. The salient featuresof the syenite occurrences are given in Table 2. The Pulikonda alkali syeniteis found with mafic microgranular dyke-lets and enclaves (mafic syenites)indicating spectacular co-existence of mafic and felsicsyenitic magmas exhibiting dominantly magma minglingcharacter with limited mixing nature and are characterized by the presence of multiple syenite phases i.e., mafic phasesand felsic phases.

Note: In the given figure (Figure No. 01) bold dot-dash line indicates the western limit of a positive Bouguer gravity anomaly (Kaila and Bhatia, 1981). The Mesoproterozoic Cuddapah and Kaladgi Basins are indicated by CB and KB; Neoproterozoic shear zones of high strain are: N-V:Nallamalai-Velikonda; M-B:Moyar-Bhavani; At:Attur; P-Ca:Palghat-Cauvery; A:Achankovil; a-g are granulite massifs; a:Coorg; b:Biligirirangan (B-R); c:Shevroi; d:Nilgiri; e:Kollimalai; f:Annamalai; g:Palni. The inset shows the main Archaean Blocks in South India. EG:Eastern Ghats; NB:Northern Block; WSB:Western Sub-Block; EB:Eastern Sub-Block; SB:Southern Block. Syenite: 1. Koppal, 2. Dancherla, 3. Vannedoddi, 4. Peddavaduguru, 5. Chintalacheruvu, 6. Danduvaripalle, 7. Reddypalle, and 8. Pulikonda.
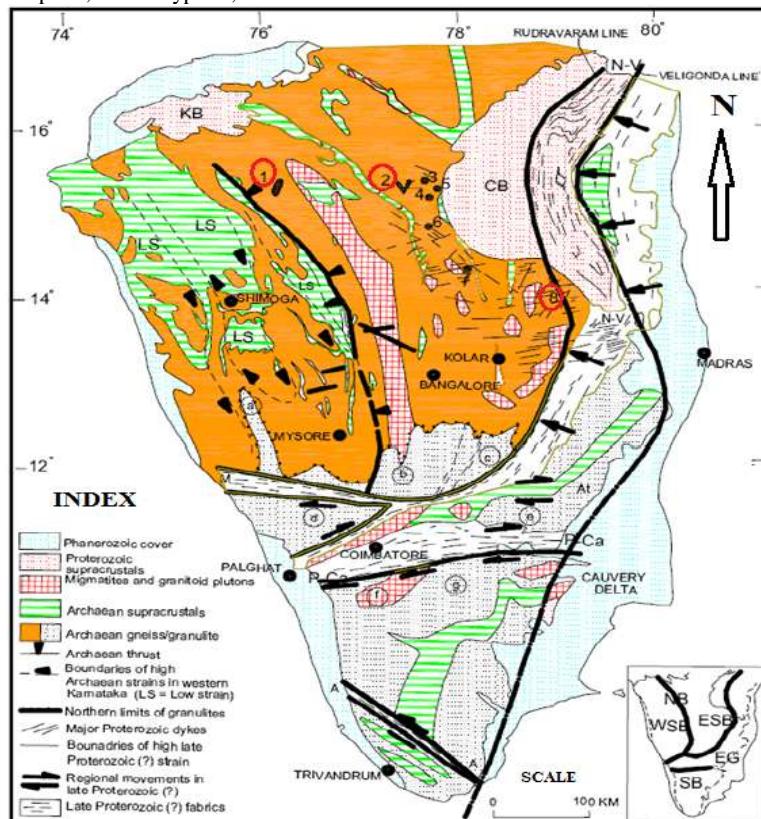
Figure No. 01: Location map of syenites shown in regional tectonic map of Eastern Dharwar Craton (*modified after* Suresh et al, 2010)
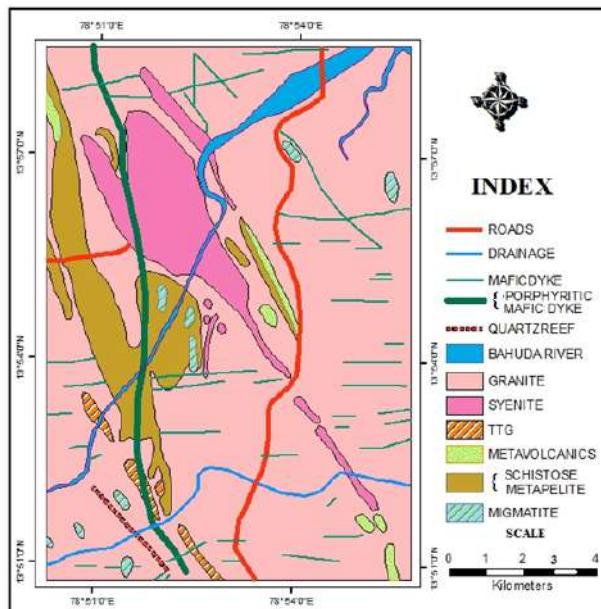
Figure No. 02: Geological map of Pulikonda alkali syenite pluton
(modified after Suresh et al, 2010)

The Pulikonda alkali syenite plutonis dominantly comprised of medium to fine-grained greyaegirine-augite/aegirine-riebeckite bearing meso-syenitewhich shows differentiation into buff coloured leucosyenite/pegmatite (monzonite and alkali feldspar syenite). Medium-grained dark greyish green melasyenite (aegirineaugite-apatite and sphene rich shonkinite) occurssubordinately as an early phase (aegirine cumulates) andoccurs as oval shaped pods and lenses confined to mesosyenite. Locally the leuco segregations graduallycoalesce into patches of pale pink to leuco/grey mesosyenite. Rarely seen are the mesosyenitic enclaves within melasyenite. TheMesosyenite differentiated into leuco globularsegregations (leuco-syenite) with dominant riebeckiteand biotite±tourmaline and fluorite. The magnetite andilmeno-magnetite bearing pegmatite patches are enrichedby albite, opaques, riebeckite and biotite. Locally thedifferentiates are seen as bands rich in potassium feldsparinterbanded with plagioclase rich (±concentrically zoned plagioclases) bands. The Pulikonda syenitepluton is found with profuse injectionsof biotite granite, syenite and granite pegmatite and aegirine-riebeckitealkali granite i.e., association with bi-modal granites. The pegmatites show development of megacrystsof green aegirine-augite which are being replaced byriebeckite, hornblende ± actinolite, epidote, biotite pyrite,magnetite and tourmaline at the contact areas. The Pulikonda alkali syenitepluton is enriched in riebeckite along contacts and the amphiboleand biotite are seen replacing aegirine-augite towards southwhere melasyenite tapers down and occur as small en-echelon lenses. Pulikonda alkali syenites are of two types, they are mafic syenites and felsicsyenites -an early formed 'mafic rich melasyenite' and laterformed leucosyenites. Similarly two generations of melano to leuco syenitesare found i.e., (a) syenite forming after differentiation froman early formed mafic rich syenite and (b) later formed anindependent syenite phase, thus exhibiting a complexmagmatic history.

Table No. 2: Geological sequence of different rock types in the
Pulikonda alkali syenite pluton

Age	Craton	Sub-Craton	Emplaced Pluton	Rock Types
Proterozoic	Dharwar Craton (DC)	Eastern Dharawar Craton(EDC)	Pulikonda alkaline pluton	Mafic Dyke
Late-Archaean				Quartz veins
				Pegmatite
				Granite
				Syenite
Archaean			Tonalite Granodiorite-Monzogranite (TGM) in PGC	Tonalite and Granodiorite
			Dharwar Greenstone Beltin Peninsular Gneissic Complex(PGC)	Acid to Intermediate meta-volcanics with minor meta basics
				Schistose metapellite
			Tonalite Trondhjemite-Gneisses (TTG) Suite in PGC	Migmatite

PETROGRAPHY

The evidences for magma mingling and mixing of maficsyenite and felsic syenites are: (1) intrusion of shonkiniteinto coarse/pegmatoidal syenite as mafic microgranularsyenite dykelets disrupting the cuspate shapedmicrogranular mafic syenite enclaves, (2) the clustering ofmafics and felsics and formation of mafic schleiren banding,disaggregation of mafic enclaves into mafic clusters/segregates, (3) armoured grains i.e., feldspars mantled bymafics, (4) potassium feldspars mantled by plagioclasefeldspar (rapakivi texture) and multiple oscillatory rims ofalternately arranged potassium and plagioclase feldsparsi.e., interaction of soda magma series and potash magmaseries, (5) occurrence of quenched aegirine-augite and apatiteneedles in syenites and (6) the poikilitic and sieve textures,sieve texture between mafics and felsics and betweenmicrocline and plagioclase feldspar and seriate texture andpresence of felsic inclusions in mafics and vice-versaindicate magma mixing character. The replacement ofmicrocline perthites by anti-perthites and perthites by non-perthiticK-feldspar and vice-versa also noticed. Medium-grained (euhedral to subhedral) to fine-grained,hypidiomorphic granular, porphyritic and pegmatoidaltextures are found in all syenites from Pulikonda pluton described below.

The mafics (made up of 70%in shonkinite) are essentially made-up of green aegirine-augitein association with minor to accessory riebeckite, patches (string, braided veins and patches etc.) or marginalgrains or medium-grained intergranular type.The perthiticphenocrystic microcline contains inclusions of plagioclase(granular aggregates), quartz, opaques, sphene, titan-

augite,epidote etc., (sieve texture). Opaques, sphene and apatiteoccur as inclusions within aegirine which also occur as individual or clustered grains. Replacement of plagioclaseby microcline leaves patches or worm like relicts.Concentrically zoned hexagonal/double hexagonal shaped sphene, opaques and apatite. The schistose hornblendesyenite exhibits original pyroxene characters like twinning,extinction etc., (the original protolith could be coarsepyroxene syenite). Here the feldspars are feebly twinned,strain shadowed, saussuritised and epidotised. At places themafic rich schistose monzo-syenite is seen with seriate andpoikilitic textures containing dominantly brown biotiteenclosing bottle green coloured aegirine, sphene andopaques.The fine-grained (aplite) luecosyenite is enrichedin pyrite and contain minor epidote, sphene, apatite andwith actinolite. The brittle-ductile deformed alkali-feldspargranite is made-up of perthitic microcline and quartz withminor sericitised plagioclase feldspars, aegirine, riebeckiteand actinolite.

Brittle-ductile deformational features are almostubiquitous with the presence of parallalley aligned (schistosity)and stretched mafics/felsics, coalescing of grains into maficrich bands (kink bands), strain shadows, feebly twinnedporphyroclasts of feldspars; different degrees of grain margingranulation and recrystallization (subgrain formation) intofine-grained felsic matrix associated with actinolite, sphene,epidote etc., rotation and swirling of mafics aroundporphyroclasts, fracture filling of recrystallised fine-grainedmatrix etc.

GEOCHEMISTRY

Table No. 03: Trace element data of Pulikonda alkali syenites

Sl.No. ELEMENT	01(Mela Syenite) PKS-13	02(Leuco Syenite) PKS-20	03(Leuco Syenite) PKS-07	04(Leuco Syenite) PKS-03	05(Leuco Syenite) PKS-10	06(Leuco Syenite) PKS-05
Sc	24.1	13.21	52.03	28.51	28.43	24.14
V	228.94	78.14	254.31	62.09	80.76	50.97
Cr	7.91	11.11	12.34	25.65	7.36	11.08
Co	27.22	21.89	18.15	11.28	8.55	7.13
Ni	21.47	34.59	19.29	26.14	9.03	10.59
Cu	6.98	24.9	2.06	2.02	1.64	4.85
Zn	79.33	292.57	13.42	7.15	6.99	6.68
Ga	21.43	21.9	29.66	17.01	18.79	18.31
Rb	7.83	195.44	128.19	190.23	172.76	332.17
Sr	395.18	358.13	155.95	352.3	177.19	173.93
Y	17.9	19.12	33.56	27.48	17.50	18.29
Zr	41.39	92.7	13971.5	564.27	209.83	451.43
Nb	1.94	6.91	149.11	69.76	40.87	59.66
Cs	0.1	12.73	7.03	2.79	2.25	3.83
Ba	38.81	680	51.09	95.65	64.34	67.26
Hf	1.3	2.91	244.72	14.06	7.44	12.93
Ta	0.07	0.29	1.25	2.07	0.30	1.28
Pb	2.22	57.31	36.06	29.78	28.98	18.78
Th	2.05	12.93	7.31	1.31	2.67	1.73
U	0.73	7.34	8.92	1.13	0.66	0.94

The Pulikonda alkali syenites are saturated to over-saturated and sub-solvus type. The location of samples and chemical analyses (Trace elements and Rare Earth Elements) of the Pulikonda alkali syenites are given inTables 3& 4. Chondrite normalized Rare Earth Elements patterns (Fig. 3) of the Pulikonda alkali syenite, indicate the source region.

The Rare Earth Elementsdistribution in Pulikonda alkali syenite pluton in general shows high fractionationbetween LREE and HREE which is characteristic of lowdegrees of partial melting of mantle resulting into alkalinemagmas.There is no Eu anomaly suggesting no role of plagioclase fractionation and source region compositioncould be garnet peridotite.

The leucosyenites are depleted in LREE and HREE whilemelasyenites are highly depleted in LREE and HREE. Mafic syenite enclavesare comparatively enriched than the leucosyenites in general and they show moderatefractionation with low HREE and moderate LREE content. Rapakivi texturedporphyritic syenites, melasyenites and leucosyenites are enriched in LREEand HREE.

Table No. 04: Rare Earth Elements data of the Pulikonda alkali syenites

Sl.No.	01(Mela Syenite)	02(Leuco Syenite)	03(Leuco Syenite)	04(Leuco Syenite)	05(Leuco Syenite)	06(Leuco Syenite)
ELEMENT	PKS-13	PKS-20	PKS-07	PKS-03	PKS-10	PKS-05
La	11.91	66.40	42.79	52.21	29.63	32.27
Ce	9.17	48.66	43.76	48.34	30.45	29.79
Pr	7.05	34.41	36.85	44.65	27.05	25.55
Nd	6.34	26.74	29.78	38.67	21.76	20.38
Pm	NA	NA	NA	NA	NA	NA
Sm	5.42	15.84	17.76	24.61	12.41	11.03
Eu	3.83	10.19	11.17	16.23	10.52	7.92
Gd	4.91	9.63	11.78	14.65	7.90	7.65
Tb	3.84	5.76	12.12	13.23	7.58	7.27
Dy	4.02	4.85	8.62	8.20	4.96	5.00
Ho	3.69	3.96	7.92	6.51	4.09	4.16
Er	3.74	4.00	8.26	6.19	4.18	4.34
Tm	3.68	3.97	7.79	5.29	3.53	3.68
Yb	4.08	4.51	9.18	6.92	4.29	4.06
Lu	4.12	4.41	7.06	6.18	4.41	4.85

The fractionation from mafic syenite to leucosyeniteshows inverse relationship with LREEconcentrations. The mafic syenite occurring as enclaves/dykelets shows enrichment in LREE and HREE. Similarcharacter is shown by pink syenite comprising disruptedmafic microgranular enclaves and rapakivi texturedporphyritic syenite which were derived by mixing of maficand felsic syenites. Unusually the decrease of LREE andHREE with respect to progressive fractionation is noticedin the syenite vartiants. Mafic syenite enclaves of Pulikonda alkali syenite pluton showanomalous values (ppm) of the following elements U(8.92), Th (12.93) and Zr (13971). The Pulikonda alkali syenite pluton showshigher concentrations (values in ppm) of Zr (13971), Nb (149.11)and Ta (2.07).
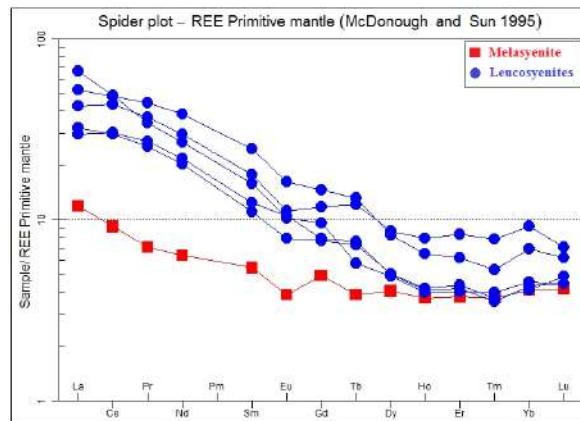
Figure No. 03: Rare Earth Elements plot of the Pulikonda alkali syenite pluton*after Mc Donough and Sun* (1995)

GEOCHRONOLOGY

The Pulikonda syenite yielded a six point whole rockisochron age of 1500 ± 100 Ma with initial $^{87}Sr/^{86}Sr$ ratio of 0.7085 ± 0.0047 and MSWD=2% (Suresh et al, 2010). The higher initial Sr(i)value for this body suggests metasomatised mantle or crustalcontamination (long crustal residence). This age does notcorroborate with the actual geological set-up of the area andolder age of at least 2000 Ma age is expected. Resetting ofRb-Sr systmatics for Pulikonda alkali syenite pluton was interpretted dueto later repeated deformations (basement tectonics) andthermal and fluid influx (reactivation of shear deformation superposed over already sheared syenite along Rudravaramline) during formation and subsequent orogeny ofMesoproterozoic Nallamalai Fold Belt. Thehornblende biotite granite from Pagadalapalle which islocated between Tsundupalle Schist Belt and Nallamalai Fold Belt hadyielded a whole-rock Rb-Sr isochron age of 2451 ± 34(Pandey et al, 1995).

ORIGIN OF SYENITE

The Eastern Dharwar Craton is characterized by two major alkalinemagmatic events i.e., (1) late-Archaean to Palaeoproterozoic,pre-Cuddapah, silica-saturated to over-saturted magmatismconfining to extensional tectonic settings set-in EasternDharwar Craton after calc-alkaline magmatism and (2) Mesoproterozoicpost-Cuddapah under-saturated alkaline complexes of Prakasam Alkaline Province emplacedat the craton margin. There are at least three cycles ofemplacement of pre-Cuddapah tholeiitic mafic magmatism(mafic dyke swarms emplaced at ~2400 Ma,~2200 to 2000 Ma and ~2000 to 1800 Ma on the basis ofavailable age data) interspersed with two cycles of (pre-graniticand post-granitic) alkaline magmatism took place.The earliest mafic dyke activity dated at 2400 Ma byIkramuddin and Stueber (1976) was preceded by first phaseof late-Archaean alkaline magmatism (Shrimp U-Pb ageof~2500 Ma for Koppal alkali syenite by Chadwick et al, 2001).The second phase of alkaline magmatism took place around~2200 Ma (Pandey et al, 1995; Zakaulla et al, 1998).

Three distinct co-eval primary magmas i.e., mafic syenitc,felsic syenitic (both mantle differentiates and crustal derived)and alkaline mafic magmas played a major role in the genesis of

syenites. Comingling and limited mixing of independentsyenitic magmas i.e., felsic syenitic and mafic magmas accompanied by fractionation into soda rich andpotash rich variants was the tentatively deduced mechanism forthe origin of syenites. They were derived from the sourcearea of the enriched or metasomatised subcrustal lithosphericmantle or lower crust. Low degrees of partial melting ofmantle at different depths yielded different compositionalmelts which were simultaneously emplaced into overlyingcrust and involved in mingling and mixing at different timespaceepisodes i.e., initially at the craton margin and lateron into the craton interior where the strike slip faults/brittleshears had played a major role for the emplacement ofalkaline rocks.

The Pulikonda alkali syenite pluton was evolved mainly frompartial melting of dominant lower crust and subordinatemantle which produced juvenile mafic intermediatealkaline magmas. It was formed due to differentiation byliquid immiscibility during pre-collisional extensionaltectonics along a sinistral ductile shear zone (accretionaryterrane boundary marked by Tsundupalli Schist Belt) during waning stages of calc-alkaline arc magmatism i.e., beforethe emplacement of granitoids of monzogranite-syenogranite suite. Later on, thissyenite was intruded by alkali granite. Crustal delaminationor convective thinning of a denser garnet rich lower crustthat had resulted after extraction of earlier voluminous granite magma of monzogranite-syenogranite suite must have been responsible forthe formation of alkali granites and felsic syenites ofPulikonda. Hence, a mixed origin is proposed for theevolution of Pulikonda alkali syenite pluton. The Pulikondaalkali syenite pluton was emplaced into Tsundupalli Schist Belt and calc-alkaline tonalite-granodiorite-monzogranite suite of granitoids along a rift zone i.e.,along Rudravaram Shear Zone which was formed in a zonebetween two accretionery terranes. During the same timethe juvenile and anatectic granites (derived frommigmatisation of tonalite-trondhjemite-granodiorite gneisses and Tsundupalli Schist Belt)of monzogranite-syenogranite suite emplaced almost contemporaneously and sealedboth the sides of this syenite line. The intrusion of Pulikondaalkali syenite pluton probably caused locally migmatisation of rocks ofTsundupalle Schist Belt and calc-alkaline granitoids. Lateron, the 1800 Ma old Rapur orbicular granite along withhost rocks of Nellore Schist Belt and associated~2550 Ma old basement granites got accreted along moderate to steep easterly dipping shearzone i.e., along Velikonda line.The Rudravaram andVelikonda lines were later reactivated at ~1600 Ma ageresulting into the formation of Nallamalai sub-basin whichwas subsequently folded into Nallamalai Fold Belt. Probably during sametime, the emplacement of alkali granite along ductile shearedPulikondaalkali syenite pluton (Rudravaram line) took place and wasresponsible for the resetting of the Rb-Sr systematics ofPulikonda alkali syenite pluton due to thermal and fluid influx. Thisgranite contains secondary riebeckite, hornblende, biotite,epidote, actinolite and chlorite (alkaline metasomatism).Subsequently the ductile sheared Pulikonda alkali syenite alongwith mylonitised granite injections was thrown into tight toopen folding and subsequent cross folding due to orogeny of Nallamalai Fold Belt.

The late-Archaean Pulikondaalkali syenitepluton indicates the presence of probably apalaeosuture, though nepheline syenites are not found,representing a remnant of Deformed Alkaline Rocks and Carbonatites occurring at the contactof two tectonic blocks on either side of Tsundupalli SchistBelt. This is similar to the recently identified and describedMesoproterozoic Deformed Alkaline Rocks and Carbonatites (Leelanandam et al, 2006) whichare located at the contact zone of the eastern margin of theEastern Dharwar Craton with the Eastern Ghats GranuliteBelt.Thus the present studies reveal the formation of Deformed Alkaline Rocks and Carbonatitessuccessively.The earliest ones were formed along a terraneboundary formed between two tectonic blocks occurring atthe near interior of the craton which was subsequentlyfollowed by the formation of younger age Deformed Alkaline Rocks and Carbonatites alongthe contact zone of the craton margin with the Eastern Ghats Granulite Belt. Thelast episode of syn to post-

Nallamalai manifestation ofmagmatism was represented by minor mafic volcanics anddykelets, ultrapotassic volcanics, acid tuffs, ignimbrites,lamproites (~at 1400 Ma) and alkali syenites within the Nallamalai Fold Belt. The magmatism took place along regional scale deep seatedmajor crustal dislocation zones in Nallamalai Fold Belt (Nagaraja Rao etal, 1987; Abdul Matin and Jayadeep Guha, 1996; Reddy,1998; Madhavan et al,1994, 2002). The manifestation ofacid magmatism took place in the form of emplacement ofdomal granites at Vellaturu and Ipur around 1550 Ma(Crawford, 1969; Crawford and Compston, 1973) along NEmargin of Nallamalai Fold Belt i.e., along Velikonda-Shernawala shear zone.According to Ratnakar (2008) the miaskitic nephelinesyenite complexes of Prakasam Alkaline Province were evolved around 1200 Maand intruded into the granulitic continental crust in a rifttectonicsetting characterised by trans-lithospheric faults,deep seated fractures and shear zones in the deep continentalmargin setting. Three distinct primary mafic magmas i.e.,alkali basaltic, lamprophyric and lamproitic were attributedfor the evolution of alkaline rocks of Prakasam Alkaline Province in continental riftsetting along craton margin and also their manifestation onthe alkline magmatism (formed during single geodynamicevent) in the immediately adjacent interiors of craton i.e.,lamproites from Nallamali Fold Belt of the Cuddapah Basin.The source is metasomatically enrichedSub-Continental Lithospheric Mantle lying belowthe granulite terrain.Geochemical signatures suggestincreasing degrees of partial melting from south to northfor both lamprophyre and lamproite sources possiblyrelated to progressive northward propagation of the rift.

Two successive episodes of alkaline magmatism i.e., late-Archaean to Palaeoproterozoic pre-Cuddapah and Mesoproterozoicpost-Cuddapah times and each one againcharacterized by two cycles took place under differenttectonic domains i.e., initially under sinistral slip shearfollowed by dextral slip shear. The early cycle of eachepisode of magmatism was initially triggered at the platemargintectonic setting which was followed by the secondcycle confining to an intra-plate/within-plate tectonicsettings of Eastern Dharwar Craton. Thus the first cycle of earliest episode ofalkaline magmatism was triggered along the accretionarybounadries of the micro-plates or sub-terranes representingthe margins of linear greenstone belts bounded by sinistralshears. The second cycle took place in the thickened interiors of the craton after amalgamation or accretion/suturing ofthese micro-plates into a major composite tectonic blockresulting into Eastern Dharwar Craton.

The Pulikonda aegirine-riebeckitesyenite emplaced just before the emplacment of Monzogranite-Syenogranite suiteof granitoids and in turn intruded by aegirine granite andpossibly genetically related. The main focus of this paper is on the their spatialassociation, different cycles of alkaline magmatism, differenttectonic positions may craton margin or craton interior; therole of mantle and crust for the formation of these rocks andmagma mingling and mixing and accompanying fractionalcrystallisation processes of syenite magma duringevolution of late-Archaean rare alkaline rocks of the Eastern Dharwar Craton.The authors suggest adetailed geochemical,isotopic and geochronologcal studiesof the Pulikonda alkali syenite.

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