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Multiage Grouping and Academic Achievement

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Research on Multiage Education

Multiage classes during the elementary school years have been an option of educational practice in the United States since the introduction of graded education in the 19th century. Since 1949, several research studies have investigated the relationship between multiage grouping and academic achievement. Reviews of research (Anderson & Pavan, 1993; Pratt, 1986; Gutierrez & Slavin, 1992; Veenman, 1995) reveal inconsistent results. Based primarily on standardized achievement tests, some studies report higher scores for students in multiage classrooms. Other studies favor academic achievement for students in single-age classrooms. More than half of the studies reveal no differences. Veenman (1995) suggests that inconsistencies in research outcomes may be attributed to an inconsistent definition of multiage education. Other researchers (Anderson & Pavan, 1993; Nye et al., 1995; Pratt, 1986) attribute confusion in research outcomes to weak controls for differences between experimental and control conditions and to lack of detail in data analysis—even though experimental studies should be designed to control for these differences. Forced assignment of both students and teachers to multiage classrooms may have contributed to negative academic outcomes in some situations (Slaton et al., 1997). According to Lloyd (1999), the variety of ways multiage grouping is conceptualized and implemented limits the ability of researchers to make generalizations about the academic impact of the multiage model.

Despite inconsistencies in research findings, those studies that report significant achievement outcomes for students in multiage classrooms over those in single-age classes demonstrate gains in language (including vocabulary and literacy measures) and mathematics (Gutierrez & Slavin, 1992; Nye et al., 1995). Advantages have been reported for both high- and low-ability students (Lloyd, 1999; Lou et al., 1996). However, gains are most consistently noted for "blacks, boys, underachievers and students of low socioeconomic status" (Anderson & Pavan, 1993, p. 50). In studies looking at long-term effects, advantages for multiage students have been shown to increase the longer students remain in multiage classrooms. Advantages in the academic realm are supported by consistent reports across studies of specific benefits of multiage grouping in the area of socioemotional development. Students in multiage classrooms demonstrate more positive attitudes toward school, greater leadership skills, greater self-esteem, and increased prosocial and fewer aggressive behaviors, compared to peers in traditional graded classrooms (McClellan & Kinsey, 1999; Veenman, 1995). These variables have been shown to positively influence achievement outcomes in traditional classrooms (Stipek, 1998) and, recently (Kinsey, 2000), in multiage classrooms. In light of consistent positive benefits for multiage grouping in the socioemotional realm, inconsistent outcomes in the academic realm are surprising.

Defining Multiage Is Key to Interpreting Research Outcomes

While a variety of models are represented in the research, contemporary implementation of multiage grouping is defined by Katz, Evangelou, and Hartman (1990, p. 1) as "placing children who are at least a year apart in age into the same classroom groups" so as to intentionally "optimize what can be learned when children of different—as well as same—ages and abilities have frequent opportunities to interact." The framework encourages the use of child-directed and experiential learning. Where descriptive research data are available, it appears that many multiage classrooms continue to make extensive use of traditional teaching practices such as ability grouping and whole class instruction, while some single-age classrooms use more developmentally appropriate teaching practices than multiage classrooms. Further, most research examining the impact of multiage grouping has not made clear whether the multiage classroom provides a unique advantage in either the affective or academic realm beyond what can be achieved by simply employing developmentally appropriate practice.

A consistent factor in those studies that show positive achievement outcomes for multiage students over same-age students is the use of a developmentally appropriate approach to teaching, including teaming, cooperative group work, integrated curriculum, and encouragement of interactions among students. Research supports the use of developmentally appropriate teaching practices in producing positive achievement outcomes (Hart, Burts, & Charlesworth, 1997). In addition, a substantial body of research supports the use of cooperative as compared to competitive or individualistic educational efforts. In a synthesis of the results of over 375 studies, Johnson and Johnson (1994) cite evidence that interactive involvement among classmates may be one of the most cost-effective "support systems" for increasing academic achievement (p. 56). According to Slavin (1987), "Under the right motivational conditions, peers can and, more important, will provide explanations in one another's proximal zones of development [as described by Vygotsky], and will engage in the kind of cognitive conflict needed for disequilibration and cognitive growth [as described by Piaget]" (p. 1166). However, Slavin's work demonstrates that peer interaction in and of itself does not enhance learning. Rather, learning enhancement depends on the specific ways that the teacher guides those interactions.

Cross-age Interaction as the Unique Variable

Using both quantitative and qualitative analysis, a study by Kinsey (2000) supports Slavin's (1987) work by suggesting a relationship between facilitated cross-age interactions and achievement outcomes. Building on results from a study reporting increased frequencies of prosocial behaviors of students in multiage classrooms (McClellan & Kinsey, 1999), Kinsey demonstrated that higher teacher ratings of student prosocial behaviors were significantly related to greater student achievement outcomes on both standardized and report card assessments. Statistical analysis demonstrated that students from multiage classrooms achieved greater academic outcomes in relation to their abilities and demonstrated greater increases in academic achievement than students of the same and higher abilities from single-age classrooms when all classrooms employed developmentally appropriate teaching practices. Kinsey reports data from teacher questionnaires and interviews suggesting two major components of the multiage classroom that contribute to academic achievement: first, the family-like atmosphere that reduces the incidence of social isolation and encourages risk taking that is associated with meaningful learning (Johnson & Johnson, 1994); and, second, the dynamic of the returning older students (who have more classroom and educational experience) engaging in cross-age interactions in learning activities. It is critical to note that the academic benefits demonstrated for students in multiage classrooms by Kinsey may be the result of the classroom teacher's active facilitation and encouragement of cross-age learning opportunities. The unique contribution of multiage grouping may be its capacity to address the needs of individual students by (1) creating an occasion for scaffolding of growth opportunities provided by both the teacher and a multiage peer group and (2) providing an environment in which close relationships between teacher and student and among classmates allow for the development of mutual trust and understanding. Results from Kinsey indicate that both the combination of these relationships and the environment in which they are formed make a significant contribution to the academic growth of students in multiage classrooms, beyond the use of developmentally appropriate practices.

To the Future

Effective research in the area of multiage education is still in its infancy. In the current climate of accountability, widespread acceptance of the multiage model in elementary schools is unlikely until it is clear that multiage education leads to greater academic achievement. If careful attention is given to definition and selection of multiage classrooms, and detailed descriptions of classroom procedures are provided, research outcomes may reliably indicate which specific aspects of multiage classroom practices are most beneficial. However, because of the present ambiguity in definitions of multiage education, educators who are currently using the multiage model, and those who are contemplating its implementation, need to assess the impact of their specific multiage classrooms on academic achievement for students participating in these classrooms. At the same time, researchers need to continue to explore through qualitative measures—observational study and directed interviews with both teachers and children—how the multiage classroom can contribute to academic achievement.

For More Information

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