

**THE EFFECTS OF CHRONOLOGICAL AGE AT
SCHOOL ENTRY ON SCHOOL PERFORMANCE**

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SCHOOL ENTRY ON SCHOOL PERFORMANCE

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To the Graduate and Research Council:

I am submitting herewith a Research Paper written by Shari Steele entitled "The Effects of Chronological Age at School Entry on School Performance." I have examined the final copy of this paper for form and content, and I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

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CHAPTER I

INTRODUCTION

Researchers, in recent years, have attempted to examine the developmental aspects of children's academic education (Moore & Moore, 1979). Donofrio (1977) claimed that one of many factors affecting academic success is school entrance age. The issue of when children should begin formal schooling has been hotly debated and has produced great controversy among educators and psychologists (May & Welch, 1986). Much research suggests that if children begin school too soon, or before they are ready, their chances for failure increase dramatically (Uphoff & Gilmore, 1986).

Wood, Powell and Knight (1984) stated that one difficulty in evaluating the effect of school entrance age is a failure to agree upon a definition of readiness. Since children develop at different rates, within and between genders, it has been difficult for researchers to pinpoint a specific age at which all children are ready to begin formal schooling (Moore & Moore, 1979).

Reeve and Holt (1987) defined the educational concept of readiness as that level in a child's development at which he/she is capable of learning; however, as the child is expected to meet the multiple demands in school, readiness becomes more complex. For example, these demands require that a child at least be ready to read, write, count, follow directions, sit still, and play

appropriately. To compound the problem, different schools have different expectations for newly arriving students. Some schools expect a child to have developed readiness abilities prior to academic instruction while others expect school training to provide the experience necessary for broader readiness (Reeve & Holt).

Brenner and Stott's 15-year study (cited in Moore & Moore, 1979) investigated the interaction of readiness and successful school achievement. The results indicated that the older the child, the more he/she will have gained experience and knowledge of the world; and, the greater this body of knowledge before entering school, the more successful the child will be during his/her school years.

Based on a review of the literature, Moore and Moore (1979) discovered a number of aspects that make up school readiness. These aspects are: (a) a chronological age by which time some experiences have been accumulated; (b) the cognitive ability to understand these experiences; (c) a body of knowledge obtained through experience, including the use of language; (d) physical development; (e) perceptual discrimination; and (f) a readiness to read. It was suggested that these factors rarely converge in a child of average ability until about age eight or ten; it is not unusual that one to two more years is required.

In reporting a study by the Educational Testing Service, Anderson (1968) noted that a committee of child development experts considered sensimotor, cognitive-

intellectual, and social-personal development of equal value for school readiness. Moral judgement and conduct were also deemed important. Only 60% of a national sample of 7,000 children were considered ready for school in regard to these aspects, according to their own first-grade teachers. Anderson further noted that if educators can't make pupils out of 40% of the children, the problem is not within the child, but within the school.

Reeve and Holt (1987) acknowledged that the ideal would be for children to enter the formal education system only when they are ready, but this is not a reality. The criterion for admission into the majority of public schools is chronological age as of a specified calendar date (Kinard & Reinherz, 1986). According to Gredler (1980), this long standing school admission policy stems from a belief that school readiness is largely determined by the child's level of maturational development, which is thought to be reflected in the child's chronological age.

School entrance ages and cutoff dates generally tend to be arbitrary. Miller and Norris (1967) reviewed the literature on state and local entrance age policies and found a trend toward an earlier admission age from 1918 to 1957, and a reversed trend from 1958 to 1963. For the most part, the trend has continued in the direction of later cutoff dates for the past 20 years.

According to currently available information (National Education Association, 1987), the following represents

current school entrance age dates for the various states: 21 states have September cutoff dates; 17 states have cutoff dates in either October or December; six states claim either January, August or November; five states entertain local options; and one state claims a June cutoff date. Twenty-one of these states have moved their entrance age dates back since 1975. Compulsory age requirements range from age 4 1/2 in the Virgin Islands to age eight in Washington, Pennsylvania and Arizona; however, the most popular school entry age is six years (National Education Association). Anderson (1968) claimed that educators' rationale for beginning formal education at age six is based on the assumption that children should have acquired sufficient muscular control and language development at this age to begin reading. Hildreth (cited in Montz, 1985) stated that by six years of age a child is ready for broader experiences than his/her home would provide, such as working and playing with a group of children.

Moore and Moore (1979) explained that one reason for such confusion in this area of education is that in the United States there have been no systematic, research-oriented guidelines to provide reasonably uniform entrance age laws. At the present time, the National Education Association (1987), through its state affiliates, is urging state legislation to establish September 1 as the national cutoff date for students entering kindergarten or first grade. Some reasons behind this proposal are: (a) more

women are entering and remaining in the work force; (b) more preschool programs are available; and (c) the organization of developmental-oriented curriculums.

Given this set cutoff date and the fact that children are admitted only in the Fall of the year, it is evident that students in any given grade may vary in age by as much as 11 months and 30 days (Reeve & Holt, 1987). The importance of this issue is reflected in the significant age difference between the youngest and the oldest normal entrant to first grade. Langer, Kalk and Searls (1984) explained that the oldest child in the class will have been alive 16% longer than the youngest; also the older child will have used language approximately 31% longer. Considering these differences in life experiences, it would not be surprising if the youngest children were at a substantial disadvantage when compared to the oldest children.

Davis, Trimble and Vincent (1980) provided a valuable study showing the relationship of chronological age and achievement by comparing children who entered first grade at 5 years, 8 months with those who were 6 years and older. In grades one and four, the six-year-olds scored significantly higher in reading, language, math, and total achievement. By eighth grade, the older group achieved significantly higher only in reading.

Some research has found that boys are more negatively affected by early entry than girls. For instance, a study

from the National Assessment of Educational Progress (cited in Ames, 1986) confirmed that in states with December, January, and February cutoffs, 47% of the youngest boys were found to be a year behind by the time they reached their ninth birthday. This was compared to 26% in states with an Autumn cutoff. Similarly, research conducted by DiPasquale, Moule and Flewelling (1980) studied the effect of birthdate on referrals to psychological services. They found an increase in referrals for the youngest groups, but this was true only for boys in primary grades referred for academic difficulties.

In contrast to these research studies, Dietz and Wilson (1985) reported that little or no effect on academic achievement could be related to birthdate of the student. This study included 117 Iowa children entering kindergarten. Boys scored slightly lower on some achievement measures, but not to a significant degree. There was no difference in retention between the younger and older groups. Kinard and Reinherz (1986) also found the effect of chronological age on later school achievement to be nonexistent. Differences were found related to early cognitive ability with the youngest children having the lowest scores on information processing skills; but when this influence was controlled, no achievement differences were observed in kindergarten, third, or fourth grades.

The research on this topic is extensive and contradictory. The purpose of this paper is to critique

and clarify the relationship between age of school entrance into kindergarten or first grade and its resulting effect on academic achievement. As states are re-evaluating school entry requirements, the implications for such information is critical for future curriculum development.

CHAPTER 2

LITERATURE REVIEW

Average Kindergarten Children

Campbell (1985) set out to determine if kindergarten entry age was a factor in academic failure. His sample included 457 seventh and eighth grade students who had attended school since kindergarten. The following were used as measures of academic failure: low readiness test scores, composite achievement scores below the 50th percentile, grade retention, remedial services, and failing grades. The results suggested that a large number of young entrants earned a low Metropolitan Readiness Test rating, scored below the 50th percentile on achievement tests in grades four and six, received remedial instruction, and repeated a grade. Findings indicated that the younger students faced serious academic problems in later school years.

Peters (1987) also investigated early school entry and its effect on achievement. The subject sample included 62 kindergarten children. The achievement measures used were the Wide Range Achievement Test - Revised, The Standards of Learning Objectives, and the Metropolitan Readiness Test. Results showed a statistically significant difference in achievement with the younger group scoring lower than the older group on all three measures. In addition, on the Standards of Learning Reading, the younger girls scored higher than the younger boys, but the boys in the older

group scored higher than the older girls.

Because many researchers highlighted a need for entry to be postponed for young entrants, a study (Simner, 1983) was undertaken to determine if school failure could be reduced by increasing the kindergarten entrance age from 57 to 60 months. The sample included 114 nonrepeating kindergarten children from five elementary schools in a lower socioeconomic area of a medium size urban center. Shortly after entering kindergarten, each child was tested with the Printing Performance School Readiness Test (PPSRT) and the Draw-A-Man Test (DAMT). Results indicated that of the 21 failure-prone children in the sample, only 29% of them were under 60 months of age at kindergarten entrance. However, 81% of these children attained PPSRT scores that did not meet the school readiness cutoff; 67% of them did not meet the DAMT cutoff. The number of truly at-risk children identified through chronological age was far less than the number of children correctly identified by using the cutoff points on the readiness tests. In addition, there were seven children who were younger than 60 months of age at kindergarten entry who were performing at the top of the class at the end of the school year and were promoted to advance sections of the next grade.

In another study, Simner obtained parent interview data on background variables that might influence achievement. The data indicated that failure-prone Autumn-born children had access to fewer books at home, had moved

more often by age five, and had mothers with less schooling than top-performing Autumn-born children. Evidence supported the use of psychometric screening for determining school readiness instead of increasing entry age to 60 months. Should entry age be increased, some failure-prone children would remain an additional year in a less stimulating home environment which might reduce chances for later school success, according to the research.

Peterson and Ayabe (cited in Montz, 1985) distributed surveys to all kindergarten teachers in their school district concerning an entrance date change from January to September. Results found that 90% of the teachers were in favor of the change. Even though the teachers believed that chronological age was the best criterion for determining a child's readiness, they recommended the use of readiness tests for younger children to determine social and emotional maturity.

Montz (1985) studied 20 students who entered kindergarten at less than five years, one month and 20 students who were at least five years, seven months before entry. He compared academic achievement of the two groups in grades four, five, and six, using the Iowa Test of Basic Skills. Results showed a significant difference between the younger and older students' academic achievement, with the older students receiving the higher scores. This study also found that a large percentage of the students who were retained or received modifications were within the early

entry age range at the time of kindergarten admission.

On the other hand, Dietz and Wilson (1985) reported that little or no effect on academic achievement could be related to birthdate of the student. This study included 117 Iowa children who began kindergarten in 1978. In addition to achievement scores, retention in grade was considered. On the Iowa Test of Basic Skills, second grade boys scored six months lower than girls in reading and four months lower on the composite score. In grade four, boys scored six months lower than girls on the composite score. Of the ten students who were retained, three were in the youngest age group, six were in the middle group, and one was in the oldest group. Results indicated no significant differences among the three age groups in kindergarten, second, or fourth grades in relation to achievement or retention. It was noted that 10 students were removed from the original sample who had been retained in grade after school entry; this may have affected the results.

Average First Grade Children

Davis, Trimble and Vincent (1980) examined the school records of 17,000 to 19,000 children in each of grades one, four, and eight from Kentucky public schools. The minimum age for grade one entry was five years, eight months. The achievement of the five-year-olds was compared with the achievement of six-year-olds. In grades one and four, the six-year-olds scored significantly higher in reading, language, math, and total achievement, as measured by the

Comprehensive Test of Basic Skills. By eighth grade, the older group achieved significantly higher only in reading. Other differences were observed in favor of the older group, but differences were considered nonsignificant. These findings were true for both sexes, but girls consistently scored higher on the achievement measure than boys.

Gilmore (cited in Uphoff & Gilmore, 1986) conducted a longitudinal study on Summer-born children who had started school when first eligible compared with children whose parents delayed their start by one year. Both the Iowa Test of Basic Skills and teacher-assigned grades favored the older, more mature pupils. In fact, 60% of the younger girls and 100% of the held-back girls received above-average grades, as did 47% of the younger boys and 81% of the held-back boys.

Kalk, Langer and Searls (1982) investigated the achievement relationship among students based on age at first grade entry and age relative to their classmates. Relative age was derived from the child's birthdate and the school district cutoff date for entrance into first grade. Class age was based on the average age of the students in the classroom. Both class age and relative age were significant for the 9-year-old, fourth graders in that the older children performed better in terms of achievement. For achievement among 13-year-olds, relative age was significant, but not class age. By age 17, the achievement

differences had disappeared. An analysis of grade retention rates revealed that a disproportionately large number of the youngest students were retained.

Similarly, Jernigan (1987) examined the achievement of second grade boys and girls in relation to their chronological age. The comparison was made between first graders who were seven-years-old in the Summer of 1983 and those who were eight-years-old in the Autumn of 1983. Using the Iowa Test of Basic Skills, reading, math, and composite scores were analyzed. The results indicated that the older children scored significantly higher on all measures. Gender difference was significant beyond the .001 level. This significance can be explained by the extremes in means for younger boys and older girls. Since the first grade curriculum emphasized reading, girls had an advantage over boys; however, boys scored higher in math. Younger second grade boys scored lowest in all areas except math.

Miller and Norris (1967) selected 135 subjects from the fourth and fifth grades of four predominately white elementary schools in Middle Tennessee. The students began their schooling in a nongraded primary unit that consisted of 12 instructional levels. This primary unit was followed by a more traditionally organized fourth through eighth grade program. Results showed early entrants to be significantly less ready on three of six group readiness measures. In fourth and fifth grades, there were no

significant differences between the groups in achievement, adjustment, retention rate, or rate of referral to psychological services. In regard to late entries, they were found to have been retained and referred to psychological services more frequently than the other groups. Conclusions suggested that the early entrants were at a disadvantage when they began school, but the differences in readiness did not persist as differences in achievement beyond grade one. The author noted that the results of their study may have been influenced by the effectiveness of the 12-level instructional primary unit.

Uphoff (cited in Uphoff & Gilmore, 1986), in a study of 278 pupils in a Nebraska elementary school, found that 23% of the population had birthdays between June 1 and October 15. Another 9% of the children were held back one year before entering school. The youngest children made up 75% of this school's failure population, while none of the held-back children failed a grade. Although the younger group had a higher average IQ than the group that entered school a year later, the latter group achieved the same or higher on the Iowa Test of Basic skills.

The National Assessment of Educational Progress (NAEP) (cited in Ames, 1986) analyzed data on 27,807 white nine-year-olds and found that only 10% of the oldest twelfth in the class (January birthdays in a state with a December cutoff) were a year behind their expected grade placement as compared with over 30% of the youngest twelfth. These

results were found to persist through eighth grade.

In Beattie's (1970) review of more than 20 studies dealing with age of entrance into first grade and academic success, he determined that first grade entry age significantly affected achievement. He also noted that early entrants had more speech defects, nervous indications, and personal and social maladjustments than did the older entrants (Swartz & Black, 1981).

Likewise, in Hedge's (1978) extensive review of all the literature published in the professional journals from 1900 to 1976, he found research to support that children entering kindergarten under age five, or entering first grade prior to age six, tended to have more scholastic, social, and emotional problems than children entering at an older age. Studies suggested that regardless of required entrance age and cutoff date, the children who entered at the earliest possible age have more problems and achieve less than those of equal intelligence who entered at the top of the entrance age range. Furthermore, there is evidence to suggest that gender differences do exist, usually favoring girls.

Exceptional Children

Maddux, Green and Horner (1986) contended that school entry age may influence the labeling of children as eligible for special education programs. As a result, some of the immature children at the time of testing may be mislabeled.

In research conducted by DiPasquale, Moule, and Flewelling (1980), the effect of birthdate on referrals for psychological services was examined. The sample included 552 children in grades K-13. The results indicated an increase in referrals for the youngest boys in primary grades (K-3). Since the birthdate effect disappeared in later grades, it was seen as evidence that younger children either catch up with their peers or outgrow their difficulties.

Gredler (1980) criticized DiPasquale et al. for failing to take into consideration teacher expectations, socioeconomic status, and school likeliness to refer. He further proposed that because teachers expect a young male to have more learning problems, they are more frequently referred for psychological services.

Kinard and Reinherz (1986) studied the effects of age at school entry on school performance and adjustment. They examined the use of psychological and academic services within the school as predictors of school problems. The admission cutoff date for the sample of 5-year-olds entering kindergarten was December 31. Differences were found in early cognitive ability with the youngest children having the lowest scores on information processing skills.

Although information processing skills significantly correlated with all measures of school performance and many measures of school adjustment; when its influence was controlled, no chronological age differences were observed

in kindergarten, third, or fourth grades. The results suggested that by using chronological age as the only criterion for school admission, some children may be entering who are not cognitively or emotionally ready to handle school.

While employed as a psycho-educational evaluator in Hawaii, Diamond (cited in Diamond, 1983) studied learning disabled children (LD) and their birth months. Results indicated that significantly more of the learning disabled children were born in the months July through December. In addition, the late-born (July - December) LD children were referred at significantly younger ages than the early-born (January - June) LD children. There was also a trend toward higher IQ's as measured by the Wechsler Intelligence Scale for Children - Revised for late-born LD boys and girls.

Diamond hypothesized that the entire school age population would show a similar relationship of birthdate to percentage of learning disabled children, and that the correlation would attenuate with increasing age. A follow-up study was conducted in 1983 with a sample size of 154,203 students. Months were numbered sequentially, and each month was examined to determine the percentage of LD children born in that month. As hypothesized, there was a significant percentage increase in LD children born in each successive month with the highest percentage being born in July through December. Additional supporting data were

found when it was discovered that the Hawaiian population of deaf, speech, language, and hearing impaired, like the learning disabled, showed positive correlations with birth month. Data did not support that the effect decreased as the children grew older.

Similarly, Erion (1986) investigated the relationship between age of entrance to school and classification as learning disabled. The sample was comprised of 67 children in grades one through six who were enrolled in a learning disabilities program and a control group of 67 children of the same grades. Data suggested a positive relationship between chronological age and the incidence of learning disabilities with the LD children being the youngest at school entry. There was a much higher ratio of boys to girls in the learning disabled sample.

In addition to being younger, all the LD children scored low on a perceptual measure. Erion suggested that their perceptual development is immature compared to their chronological age. Moore and Moore (1979) claimed that sensory perception may not be reasonably developed before age 8 or 10 in some children. Two years after the data were collected, 58% of these students were mainstreamed into regular classes; almost all of them repeated at least one grade. The few students who were not retained, returned to regular classes by age 10 when Moore and Moore claimed that perceptual development is complete in slow learning children.

Maddux (1980) investigated first-grade entry ages for 374 learning disabled students in grades one through twelve in a large special education cooperative. The results showed that 46% of the learning disabled children were entered early, while only 22% were late entering. These results occurred at every level through grade nine. This study implied that the maturational lag theory may play a significant role in the identification of a learning disability.

Maddux, Green and Horner (1986) studied a group of 291 special education students who were identified as learning disabled, emotionally disturbed, or mildly mentally retarded to determine if these students were relatively young at school entry. The sample population was enrolled in a school district of 29,103 students. All students were classified as either early or late entering based on their chronological age at school entrance. The results indicated that entry age was significant for all classifications of students except for the mildly retarded students. Further analysis found these results to be significant only for the elementary group of children. The findings of this study were in concordance with earlier studies of learning disabled and gifted children (Maddux, 1980, 1983).

Ames (1977) reported that of the many children labeled as learning disabled served by the Gesell Institute because of school difficulties, the majority of them were

academically overplaced. She found these children to be intelligent, potentially good students who were struggling and failing in a grade just ahead of their maturity level.

Similarly, Donofrio and O'Hare (1969) expressed concern for the frequency with which young children who were developmentally delayed were seen as needing psychological therapy by school psychologists and guidance personnel. These authors did not imply that emotionally disturbed children who exhibit a learning problem could not benefit from psychotherapy; their concern was for the referral of the children who may merely lack adequate school readiness skills.

The results of his learning disabled study led Maddux (1983) to investigate another type of exceptional child. This follow-up study was designed to determine if early entry to school is beneficial or detrimental to the gifted and talented child. Maddux examined birthdates and school entry ages of 188 children in grades five through eight of an Eastern Texas school district who had been selected for a program for the academically gifted. Findings revealed that over 60% of these gifted children were late entering. This study showed that the gifted child is not immune to the harmful effects of school entry.

CHAPTER 3

DISCUSSION AND RECOMMENDATIONS

Discussion

According to the National Education Association (1987), the importance of early childhood education is high on the educational reform list. One of the many issues under consideration is school entrance age.

One difficulty in determining an appropriate school entrance age for beginning instruction is the failure to agree upon a definition of readiness (Wood et al. 1984). Another difficulty is the limited research on which to base reasonably uniform entrance-age laws (Moore & Moore, 1979). This problem has been disputed for centuries. In the 16th century, English educator, Richard Mulcaster, said,

"One of the first questions is at what age children should be sent to school, for they should neither be delayed too long, so that time is lost, nor hastened too soon, at the risk of their bodies and the quickness of their wits jointly. What the age should be I cannot say, for ripeness in children does not always come at the same time" (Reeve & Holt, 1987, p. 499).

Some researchers have suggested that the factors that make up school readiness rarely come together in an average child until age eight or ten (Moore & Moore, 1979). Nevertheless, Braga (1971) reported that there is no single criterion for the determination of school readiness. Considering this and the fact that the most popular school entry age is six years, it is no wonder that educators began to be suspicious about the achievement deficits of

young children who are less mature. Early entrance became even more harmful when the Sputnik phenomenon introduced a curriculum shove-down, which resulted in the kindergarten curriculum covering much of what used to be presented in the first grade (Uphoff & Gilmore, 1986).

The majority of research relating entrance age to school achievement showed that children who entered at an early age had more academic difficulties than later entrants. Some studies found that the effect decreased throughout the school years, while others did not. Many studies claimed that the birthdate effect was true only of boys. It is enlightening to note also that the National Assessment of Educational Progress found data suggesting that older classes do not tend to have as many failures; the effect is most dramatic in classes of younger children (Ames, 1986).

Green and Simmons (1962) pointed out that older and younger groups of children are unequal on many measures, and the older pupils can only be said to have learned more in school if it is assumed that they didn't know more at school entry. Kinard and Reinherz (1986) proposed that this assumption is false since they found the older entrants to have higher cognitive abilities upon entrance than the younger entrants. Therefore, Green and Simmons (1962) claimed that it is foolish to expect the younger students to equal the older students in achievement progress at the end of one school year.

Although the majority of the research confirmed the birthdate effect, there are some shortcomings in this area of study. First of all, there was little mention of exceptional children other than learning disabled and gifted. One study (Maddux et al., 1986) that included a sample of mildly retarded children did not find the birthdate effect. In addition, many educational programs that are geared toward early intervention for children with severe handicaps have shown successful results. In fact, many states require schools to serve some exceptionalities at age three.

Another group of children the research failed to address in detail was the disadvantaged. Simner (1983) suggested that if these children are required to remain in a home environment that is lacking in adequate stimulation for an additional year, their school achievement may be negatively affected. This author agrees, and also questions whether or not the experience of daycare or preschool programs would influence the results of the birthdate effect. In addition to socioeconomic status, racial effects should also be studied.

When examining the birthdate effect and chronological age at school entry, it would seem appropriate to consider research on child development. Piaget outlined a model of intellectual development that consisted of four stages. In the third stage, the concrete operations period, the child has begun to develop concrete problem-solving skills,

conservation skills, and higher thought processing needed for academic work. According to this model, children may not be developmentally ready for school-related tasks until at least age seven.

Other child development research has suggested that significant gender differences exist in terms of maturity and readiness with girls being approximately six months ahead of boys on the average. Ilg and Ames (1964) reported that boys develop slower than girls in a variety of ways. This makes determination of an appropriate school entrance age even more complex.

Not only do children differ in socioeconomic status, race, and gender, they differ as individuals. No two children will be exactly alike in rate of development or readiness for school. Each child is unique, and it is difficult for schools to accommodate for their differences. According to Anderson (1968), educators are taking very small children and attempting to rapidly change them into the perfect model of what is expected of a first grade pupil.

Finally, this author found that the research did not operationalize the terms "younger" and "older." Researchers have failed in their attempt to clarify "how early" is "too early" for children to begin school. Specific ages for school entry were avoided. Considering the differences in rate of growth and development, however, this may be a question that is never fully answered.

In order to adequately deal with the issue of kindergarten and first grade entrance, the problem of the birthdate effect must be evaluated in terms of administrative feasibility. The following suggestions have been based on the outcomes of various research studies.

Ames (1986) recommended entering children on the basis of developmental age, not birthday age. She suggested that schools adopt a developmental placement policy which would allow children deemed legally of age to begin school following a developmental evaluation. The parents of children failing the test at an appropriate developmental age would be informed that their child needed two years of kindergarten. Ames stated that schools adopting this policy have reduced failures by 50%.

Similarly, Jernigan (1987) claimed that developmental age is the single most important factor when determining readiness for school. Factors to be considered when evaluating a child's developmental level are chronological age, mental age, behavior age, and gender. Gender differences in achievement led Jernigan to further recommend that the school curriculum accommodate the needs of both boys and girls. Kinard and Reinherz (1986) were most concerned with was the level of cognitive functioning at the time of school entrance.

Other researchers have focused on school entry age requirements. Although Dietz and Wilson (1985) did not

recommend delayed school entry on the basis of birthdate or gender, many others did. Maddux (1980), Maddux et al. (1986), and Davis et al. (1980) suggested that states and school districts consider raising the minimum age to six years, especially if no readiness screening is available. Miller and Norris (1967) recommended that children between the ages of 5-8 and 6-0 be admitted to school only if a flexible primary program exists and instruction is geared to their level. Gray (cited in Reeve & Holt, 1987) claimed that regardless of the entry date, it is the youngest children who do not meet school expectations; therefore, even if the entry date was changed, a younger child will experience a disadvantage.

Since a common finding in many entrance age studies is that only boys are affected, it would be difficult to raise school entrance age when the achievement of girls does not appear to be influenced (Gredler, 1980). Furthermore, the Civil Rights Act of 1964 would prevent schools from a practice that would place children based on gender differences.

Erion (1986) acknowledged that changes in school cutoff dates may be beneficial, but the best method would be individual assessment of a child's readiness for school. Kalk, Langer and Searls (1982) agreed and recommended that states using Winter month cutoff dates clinically screen all the youngest students; for states with cutoff dates in the Autumn months, only the youngest males should need this.

screening. Montz (1985) recommended screening for high risk students; whereas Miller and Norris (1967) recommended that all children entering school be screened by the school psychologist. Simner (1983) also perceived a need for a testing program for all entering kindergartners.

Referring specifically to children characterized as having a July to December birthdate, late maturation, verbal difficulty, maleness, an IQ from 80 to 90, and hyperkinesis, Donofrio (1977) recommended repetition of kindergarten in the prevention of learning problems. He further emphasized that all children should be kept from first grade work until age seven.

DiPasquale et al. (1980) and Gredler (1980) warned that there are unpredictable effects on self esteem as a result of grade repetition. Similarly, Erion (1986) stated that a child should be given extra time to mature before being identified as having a learning disability or any other educational difficulty. Miller and Norris (1967) cautioned that school personnel be aware of the social and personal factors that can lead to retention and not automatically assume a deficit in achievement.

Gredler (1980) claimed that a child who has been selected for retention does not just need time to mature, but needs an active, on-going, remedial assistance program that offers individualized instruction. DiPasquale et al. (1980) favored remedial assistance for children whose cognitive development is immature. These researchers

recommended that grade retention be employed only as a last resort because of unpredictable effects on self esteem and confidence.

Diamond (1983) suggested another remedy for immaturity. She supported modifications in teaching practices and expectations. Likewise, Campbell (1985) stated that schools should be flexible enough to accommodate the differing needs of children. Hedges (1978) likewise claimed that the entire birthdate issue would disappear if schools sought to provide the nurturing environment that children need instead of requiring that they suit the needs of the school program. Donofrio and O'Hare (1969) similarly recommended that school guidance and psychology personnel refrain from making complex psychological diagnoses of childhood learning problems and adapt the school programs to fit the child.

Uphoff and Gilmore (1986) offered a combination of the previously listed suggestions to arrive at six appropriate school actions.

1. A change in school cutoff date would be helpful.
2. A pupil developmental assessment to determine a child's readiness for kindergarten and/or promotion to first grade could be implemented.
3. Recommend that parents hold back their early entering children for one year.
4. Move the curriculum back up to where it used to be prior to Sputnik.

5. Assign developmentally delayed children to a special kindergarten or pre-first grade.

6. As a last resort, retention of grade could be utilized.

Finally, Miller and Norris (1967) recommended that school districts not make decisions regarding their school entrance on the basis of statewide studies, but instead determine the relationship between chronological age and school success in their local school programs. Specifically, Maddux (1983) highlighted the need for schools to evaluate their special education classes to determine if they contain a disproportionately large number of early or late enterers.

According to Montz (1985), the dilemma still remains as to how we, as educators, can ensure that these younger children have a successful school experience. It is unlikely that any decision will be satisfactory to parents, teachers, children and administrators alike. Nevertheless, a change in school practice is in order. The author offers the following recommendations:

1. Schools adopt a national cutoff date of at least September 1.

2. An informational meeting for parents regarding the topic of early entrance would be beneficial.

3. Screening tests for educational readiness should be administered to younger and high risk students only.

4. At the primary level (K-3), instruction should be

tailored to the developmental level of each child.

5. If, at the end of grade three, remedial assistance is needed, an educational label will be justified for children with minor learning problems.

6. Retention should be used as a last resort.

7. Further research studies are needed to address the needs of children who are significantly mentally or physically handicapped.

Of the above recommendations, this author wishes to highlight the importance of a developmentally-oriented curriculum for the primary grades. Such a curriculum would measure the rate of academic gain of each pupil throughout the school year, and, at the end of the year, the youngest pupils would not necessarily be expected to have reached the attainment levels of the oldest pupils. A program of this design would hopefully reduce failure, retention, and mislabeling of younger students. Special education programs offer individualized instruction, and colleges offer developmental programs which operate on the same principle. This author would also like to see regular education students benefit from such a practice. This recommendation is based primarily on the fact that individual differences in development and readiness for school do exist, and, to be effective teachers, educators need to be sensitive to these differences and allow children to grow and learn at their own pace.

Summary

In summary, researchers have recommended placement on the basis of developmental age, changes in cutoff dates, and school entry age, retention, remedial assistance, and modifications in teaching practices as methods through which academic failure of the youngest students can be decreased. This author notes that none of these practices will probably be beneficial in isolation. For instance, Ames (1978) stated that just because a child is six-years-old at the time of school entry does not mean that he/she is ready. In addition, Gray (cited in Reeve & Holt, 1987) claimed that regardless of the cutoff date, there will always be a relatively younger group of children. Consequently, this author questions if school entry age used alone would be the best criterion for determining readiness for school.

This author does not believe that it is the intent of educators that children flounder and struggle through school. Nevertheless, it is time to focus primarily on the children's needs so that their educational experience is a happy and successful one. There is no need to rush school; childhood has a great value in itself (Hedges, 1978). Kay Innes' poem (cited in Ames, 1986, p. 48), reprinted in part below, allows us to realize the feelings of frustration and failure of a young, immature child who is not quite ready for school.

"I'm a bright November boy,
School for me is not a joy.
Teacher thinks I'm rather slow.
I just need more time to grow!
Next to me sits prissy Pearl,
Teacher's "good" December girl.
Pearl just loves her A, B, C's -
Wants to learn to make her threes.
I prefer the trucks and water -
Teacher doesn't think I oughter.
Johnny's March - he really shines,
Colors well within the lines.
April Smith can write her name
In big round letters, all the same.
Teacher says that I don't try -
All I do is blink one eye,
She thinks that I am not too bright,
I still mix my left and right!

Teacher says I should listen more
And spend less time down on the floor.
I can sing and march and play,
I can paint - but not her way!
I made a person - red and blue
With lots of hair and buttons, too.
It was good - but what the heck!
All she said was, "Where's the neck?"

Teacher's getting rather riled,
Thinks I'm a stubborn child.
Hopes that I don't have a brother -
Says she couldn't stand another.
Warns if I don't pay attention
She is thinking of retention.
That threat of hers it thrills me so,
Then I would have more time to grow."

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