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ABSTRACT

This review of the literature focuses on research findings concerning the long-term academic, social, and emotional effects of acceleration, as well as the results of non-acceleration, on gifted children. Access to accelerated programs in Canada and the United States was also investigated. The review led to the following conclusions: (1) academic outcomes of acceleration are positive; (2) no carefully executed research has been conducted that has found negative social and/or emotional outcomes of acceleration of gifted children; (3) gifted children who are not intellectually stimulated and challenged may become underachievers and not fulfill their potential; and (4) acceleration is not widely used in Canada or the United States. Especially noted is the widespread opposition to acceleration by educators despite research which clearly finds that their concerns are unfounded. (Contains 30 references.) (DB)

ACCELERATION - A VIABLE OPTION FOR GIFTED CHILDREN

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Methods of Educational Research

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Abstract

A review of the literature on the subject of acceleration was transacted. The purpose of the study was to determine the long-term academic, social and emotional effects of acceleration, as well as the results of non-acceleration of gifted children. Access to accelerated programs in Canada and the United States was also investigated.

Many studies and literary writings were reviewed. The results of the literature demonstrated positive academic social and emotional outcomes. Under-achievement, boredom and lack of motivation were identified as potential problems of non-acceleration of gifted children. Although the literature is profoundly in favour of acceleration, it is not widely used in Canada or the United States. The greatest opponents appear to be educators. It has been suggested that educators need to be made aware of the research findings so that individual decisions may be based on fact rather than myth.

ACCELERATION - A VIABLE OPTION FOR GIFTED CHILDREN

Introduction

Acceleration is a concept that has been debated for over seven decades. Prior to the mid-nineteenth century, student performance dictated placement, promotion and graduation. However, early in the twentieth century, grade-level structures were introduced. It was felt that placing a child in a learning environment based on chronological age was fundamental to the overall well-being of the child. This was an attempt to address the emerging concerns of the time: namely, mandatory attendance, child labour and exploitation, and a need to assimilate large numbers of immigrants. Also influential, was the inauguration of the field of cognitive psychology (Southern & Jones, 1992).

Proponents of acceleration believe that there is an essential need to bring instruction up to pace with gifted learners, however, opponents (very often educators), feel that gifted children are being rushed through the curriculum without regard to their social and emotional needs (Fowler, 1990). While educators may be considerate to the social and emotional welfare of accelerated children, they seem to disregard the potential detrimental effects of non-acceleration; such as under achievement, boredom, and, the associated behavioural problems that are resultant.

Statement of the Problem

The purposes of this study were to investigate the long-term academic, social and emotional effects of acceleration and non-acceleration on gifted elementary school children, and to determine if acceleration is currently an accessible and beneficial option for those children. Acceleration is a term that has been used to describe early admission to school, grade-skipping, subject advancement and special grouping.

Statement of the Hypotheses

The intent of this study was to test four major interrelated hypotheses:

1. Gifted children who are academically accelerated attain long-term advantageous cognitive outcomes.

2. Carefully selected gifted children who are academically accelerated do not experience long-term detrimental social and/or emotional outcomes.

3. Non-acceleration of gifted children may lead to under-achievement, boredom, and behavioural problems.

4. Currently, academic acceleration of gifted children is not an easily accessible option throughout North America.

Long-term Effects of Acceleration on Gifted Children

Academic Outcomes

Acceleration is a proven, cost-effective method of challenging the young minds of gifted children. To provide stimulation for a child is an inherent duty of the educational system. There is a myriad of evidence that demonstrates that the academic outcomes of acceleration profoundly favour its use. In the late 1960's, 'equality' replaced 'excellence' as the watch word in education. However, the 1980's produced a renewed interest in providing education for gifted students. The Commission on Excellence in Education (1983), recommended that students should no longer be grouped solely by age, but instead, consideration should be given to academic progress and instructional needs (Kulik & Kulik, 1984). Both before and after this time, research was conducted which assessed the outcomes of academic acceleration. Several studies and views of the researchers will be discussed in this paper.

A series of experiments undertaken in the late 1950's and early 1960's established that an idea or concept is more firmly entrenched into one's long-term memory if it is offered at the optimum time of readiness. However, if a new task is undertaken prior to readiness, the student will become frustrated; likewise, when the task is too easy, the student will become bored and lose interest in learning (Feldhusen, Proctor & Black, 1986). It has been suggested that accelerating a precocious child by a year or two will bring them up to pace with their specific level of readiness, thereby providing a challenge and a more stimulating environment that includes socialization with peers who are more evenly matched intellectually.

In 1992, Rogers and Kimpston undertook a meta-evaluation of 19 major research studies on acceleration, from the first formal review conducted by Witty and Wilkins in 1933, up to and

including the most recent review of Van Tassel-Baska in 1986. Of the nineteen studies, only one concluded that there were disadvantages to early entrance to first grade. However, as Rogers and Kimpston pointed out, there were several flaws in the study, such as:

1. the studies primarily reviewed early entrance for average and below average students
2. no systematic search of all early entrance studies had been conducted
3. no attention was paid to the quality of study design or sample size
4. the author did not explain how he drew his conclusions or selected the studies.

Other researchers who conducted a retrospection analysis of the long-term academic outcomes of early entrants included Proctor, Black and Feldhusen (1986). In their research, seventeen studies were analyzed with respect to academic achievement attained by early entrants versus unselected classmates. Academic achievement was measured by grades, grade point averages, teacher ratings and standardized achievement scores. Sixteen of the seventeen studies indicated that the early entrants achieved equal or higher academic success than their unselected classmates.

A meta-analysis of 26 different studies that examined grade-skipping, compressed curriculum and extended calendar curriculum as a means of acceleration used two different methods of control. The first control group contained same age and equally bright non-accelerated students, and the second group used same-grade non-accelerates, matched for intelligence with the accelerates. Because of the IQ matching of the accelerates with their same-grade peers, the accelerates were approximately one year younger chronologically as well as mentally.

Thirteen studies were analyzed using each method of control. In the studies using same-age control groups, 81% of the students in the accelerated programs outperformed the typical student in the control group. The average achievement differences in the older student control groups were minimal, but in slight favour of the accelerates (Kulik & Kulik, 1984). These findings were consistent with those of Begle (1976) in his studies of mathematics achievement. The authors

point out that the accelerates had gained a year of achievement that could be used for developing their own interests, such as professional careers or graduate study. Lynch (1994) states that accelerates also report that an added benefit of acceleration is "a heightened interest in and enthusiasm for school" (p. 2).

Swiatek and Benbow (1991) conducted a study that investigated the relationship between acceleration and academic achievement, as well as psychosocial development at least five years after acceleration had occurred. The achievement attained by the students who entered college at least one year early and those who entered at an older age, but were matched for ability was consistently high for both groups. However, an aggregation of the variables tended to slightly favour the accelerates. There was no difference in the quality of schools attended by either group at both the undergraduate and the graduate levels.

Another study that demonstrates positive long-term academic results of acceleration was undertaken by Stanley and McGill (1986). This study concedes that of the 36 students who have received a bachelor's degree before age 19 from The John Hopkins University in its entire history, most have fared 'splendidly' in later life, and none has failed vocationally. The study illustrated that students who entered an academically difficult college two to five years before the normally accepted age attained high grades, won honours, and graduated on time (p. 72).

Swiatek and Benbow (1991) conclude that academically gifted students should be permitted to excel to the level that they are able and willing to go.

Goldberg (1958) pointed out that it is difficult to locate a research study that shows acceleration to be harmful, and that instead, many demonstrate very positive outcomes. Almost 40 years later, this researcher has discovered the same phenomenon.

Social and Emotional Outcomes

Prior to 1990, there was not a lot of conclusive research concerning the social and/or emotional outcomes of accelerated or early entry students. Kulik and Kulik (1984) asserted that the research in this area was sketchy and inconclusive; although worth mentioning were studies performed in the 1940's by Flesher (1945) and Terman and Oden (1947). The findings were similar on both studies - - the accelerates achieved as well as, if not better than older graduates on criteria of life achievement (p. 89).

An early study executed by Hobson in 1956 investigated social development as measured by the number of extra-curricular activities that senior high school accelerates and non-accelerates were involved in throughout their four years of high school. The results emphasized that on average the accelerates were involved in 18.8 different activities, and the non-accelerates were involved in 12.1. It was also discovered that the younger students were on average, referred to school personnel for social, emotional or personality problems less often than their older classmates (Reynolds, Birch & Tuseth, 1962, p 14). This was a large study (550 students involved) that spanned the years of high school graduation from 1946 to 1955. Although the involvement in extra-curricular activities alone does not necessitate social and emotional balance, one can at least conclude that the accelerates felt comfortable enough with themselves and others to join in activities other than academic.

Paulus (1994) claims that there are no social and emotional detrimental effects associated with acceleration. She suggests that the personal benefits "can include an increased zest for learning and life, enhanced feelings of self-worth and accomplishment, and a reduction of

egotism and arrogance (when one is in a group of intellectual peers one doesn't usually brag or show off)." This assertion counters the argument that accelerated students tend to display attitudes of arrogance and elitism. She further reasons that professionally, accelerated gifted youth will have the opportunity to start college and careers early, compete more successfully for grants and scholarships, and use more time to explore different career paths prior to marriage (p. 99).

Proctor, Black and Feldhusen (1986) reviewed seventeen studies concerning social and/or emotional adjustment. Several of the studies ascertained that there is an adjustment period after acceleration, which usually disappears over time. One study reported that there was a 28% retention rate over the first five years of school for the accelerated students. This was the highest retention rate reported of any study. One would have to wonder if there were not support systems in place to help deal with adjustment problems that the accelerates may face. Perhaps the accelerated students were placed in a 'sink or swim' atmosphere, and at the first sign of trouble, they were placed back in a safe environment, rather than being guided through the troubling area. Rimm and Lovance (1992) of the Family Achievement Clinic in Wisconsin have concluded that the adjustment period usually lasts throughout one quarter or as long as one semester.

Most studies reviewed showed that there were no significant differences between accelerates and their older aged classmates regarding social and/or emotional long-term adjustments, and in fact, the students who experienced early admission cited such advantages as avoiding boredom, opportunity to start a profession earlier, and association with intellectual peers. They were comfortable with their academic achievements and social relationships. One negative aspect that was mentioned by male students was the apparent disadvantage in competitive sports. The authors concluded that in light of the majority of the studies reviewed, children who are ready and able and yet denied early entrance may suffer negative consequences (Proctor, Black &

Feldhusen, 1986). One of the consequences may include social ostracism because of the child's advanced interests and precocious verbal behaviors (Feldhusen, 1992, p. 46).

After investigating several different accelerative options for gifted learners, Rogers and Kimpston (1992) determined that the majority of the options had minimal social and emotional effects. However, of note, were grade-skipping, which provided very positive socialization effects, and credit by examination, the results of one study which showed a small negative effect (p. 59).

It is evident that screening of candidates for acceleration is essential. One must consider the emotional level of maturity as well as academic readiness. Cornell et al. (1991) contend that early entrance candidates are more at risk because personnel in the school system are not yet familiar with the candidate's emotional maturity (Brown, 1993). Considerations such as attendance at preschool and recommendations of the preschool teachers, familiarity with the school system gained through older siblings' experiences and diversity of outside activities should all be examined.

Timing is also another element that must be carefully inspected. A longer time spent with same-age peers would indicate a more difficult social adjustment. Therefore, each candidate must be looked at as a holistic individual and the overall needs of that individual must be met. Considering the vulnerable period of adolescence, it would appear that high school students would be more at risk for social adjustment problems. However, it is during the high school and college years that the educational systems condone making individual choices of progressing through the curriculum at a more rapid pace. Unfortunately, gifted students who have learned to cruise through the elementary years with minimal effort, probably have no desire or motivation to accelerate their curriculum at a time when socialization is of the utmost importance. Had these same students been challenged to higher levels, through acceleration at a time when it was first

apparent that the curriculum became too easy, they most likely would have learned to work hard in order to achieve at the level of their new classmates. Another important indicator of success of acceleration is the student's willingness. If a student is not interested, or opposed to the option, it is unlikely to be a successful transition.

In a small study of attitudes of gifted under-achievers and their parents, it was concluded that virtually all the subjects in the study were concerned with the potentially harmful social and emotional outcomes of acceleration. This attitude was unanimously held by both successful students and under-achievers as well as both sets of parents. There were relatively few concerns expressed regarding leadership and academic outcomes. The number of participants in the study was low (n=15); nevertheless, it does make one aware that the public and educators alike must be informed that fears of social and emotional detrimental outcomes are unfounded, and not supported by research or experience (Jones, Ellenwood & Southern,1990).

A comprehensive study undertaken in 1993 ultimately did provide conclusive evidence of positive social, emotional and behavioural outcomes. Data was derived from the first stage of the National Educational Longitudinal Study: 1988 (NELS:88) from the National Center for Educational Statistics. Three groups were randomly selected from 24,599 eighth-grade students, which included all geographical areas, income levels, ethnic groups, rural and urban schools, and public and private schools in the United States. The groups were categorized as follows:

a) accelerated students (which included both early entrance and those who had skipped at least one grade K-7),

b) students in gifted classes in grade eight,

c) regular eighth grade students.

The results demonstrated levels of emotional adjustment and feelings of acceptance by others that were higher for the accelerated and gifted students than the regular students.

Students in gifted classes felt that others viewed them as good students more so than the accelerated group, which in turn reported higher status than the regular students.

Gifted students saw themselves as more athletic and reported higher on the attributes of popularity and importance than the other two groups. The accelerated and regular students did not show any difference in self-reporting of these traits (Sayler & Brookshire, 1993, p.153).

Conclusive evidence of positive self-esteem was also portrayed through student interviews conducted by Rimm and Lovance (Spring 1992). The authors maintain that students revealed that grade-skipping made them feel special and that they viewed themselves as intelligent. Students who have elected to skip a grade have made a "commitment to work harder to catch up to other students" (p. 105).

Sharon Lynch (1994) of the School of Education and Human Development at the George Washington University feels that children that are socially well-adjusted before acceleration develop two groups of friends afterwards - those that are the same age, as well as those in their new grade (p. 2).

Although early studies of social and emotional outcomes were vague, more recent studies depict accelerated students as having high self-esteem and being socially well-adjusted.

Effects of Non-Acceleration on Gifted Children

It has become increasingly apparent that gifted children need to be challenged and intellectually stimulated in order to reach their fullest potential. Students who are allowed to coast through the elementary school years without being motivated to question and delve deeper into subject areas soon undergo a metamorphosis that produces an apathetic and lackadaisical individual.

Frederick Taylor, (1989) a public school administrator with over 30 years of experience in education wrote a controversial article in Gifted Children Today. In the article, Taylor describes his own personal experience with two gifted sons. He contends that parents should not worry about their gifted children becoming bored in mainstream education systems. His advice to his own children was, "if you are all that smart, you will find ways to avoid boredom." He believes that since gifted individuals will face a lifetime of being in the minority, they should learn to relate to the normal distribution of intelligence. He describes one of his sons as coasting lazily through many public school years (p. 46,47). Although both of his sons have achieved well, (one is an engineer and the other was attending graduate school at a prestigious Ivy League institution at the time the article was written) one must ask themselves, "what would have happened had the home environment not been one of guidance and nurture throughout their tedious years of school", and, "if environment was not a factor in their success, why are all gifted children from various socioeconomic backgrounds not equally successful?"

Taylor (1989) further maintains that gifted children will not lose their giftedness if they become bored in school. This is an opinion that is countered by many researchers in academia. Feldhusen (1992) offers an opposing thought, "when there is abundant opportunity to read, to hear voices presenting new information, to see video tapes and films, to investigate, to observe, to examine, to ponder ideas, all of the good qualities of curiosity, enthusiasm, imagination, and

motivation grow and become more intense. When the avenues for intellectual stimulation are limited, curiosity diminishes, enthusiasm wanes, imagination dies, and motivation is lost" (p.45).

Several researchers have endorsed the notion that failure to stimulate and challenge leads to boredom, laziness, poor study habits, lack of motivation, and mediocre accomplishments (Bower, 1990; Feldhusen, Proctor & Black, 1986; Jones 1990; Sisk, 1988; Van Tassel-Baska, 1986). The epitome of under-challenging a gifted student is the actual promotion of under-achievement and the resultant academic failure that will follow (Rimm & Lovance, 1992, p. 10). Many gifted students 'coast lazily' through the public school systems only to discover that they do not possess the necessary tools to succeed in college. When at last they encounter a challenge, they discover that their poor study habits will no longer earn them adequate grades. Albeit the intellectual capabilities are still present, however, the life skills of hard-work and motivation are lacking.

Our gifted children must be looked upon as a valuable resource that needs to be carefully protected and nurtured to allow propagation into the next generation. Fowler (1990) reminds us that in order to be competitive with Japanese industry, we must challenge and provide profound education for the brightest and most talented. We must be alert to the unchallenged individual and provide the challenge as early as necessary.

Acceleration is an option that must be considered as soon as signs of boredom or underachievement are suspected. Children who have been identified as under-achieving, either partially or wholly resultant of an unchallenging curriculum have shown a reversal in their under-achievement ensuing acceleration. However, children with a high IQ and very difficult behaviour problems or major skill deficits are unlikely candidates (Rimm & Lovance, 1992 p.105).

Synopsis of Accelerated Programs for Gifted Children

Diversity of Programs Available

Acceleration is generally viewed as either grade-skipping, or early entrance to kindergarten or grade one. However, Rogers and Kimpston (1992) have redefined it to include eleven different options. These options are set out in Table 1. The authors concede that early entrance is a safe option, since an initial challenge would be more appropriate to a gifted child, than a later challenge after years of minimal effort. Grade-skipping is also seen to be beneficial, with the greatest research-supported social effects from grade three to six (pp. 59, 60). Arguments exist that propose grade-skipping at the end of a natural division of school, i.e., skipping the last grade in elementary school or Junior High before proceeding to the next level. The advantage would be that the individual would be inconspicuous in the flow of several schools into one.

Subject acceleration is considered to be a valuable alternative to grade-skipping for students who have demonstrated superior academic proficiency in a specific area. This is an especially advantageous election for students who express questionable emotional maturity. It may also be considered as an experimental option prior to grade-skipping.

Grade-telescoping of a group of similar ability students is a means of providing greater academic challenge for older students without removing them from their peer groups.

Enrichment is an additional option that appears to be currently in vogue. Several researchers contend that grade-skipping is preferential, and Stanley and Benbow (1986) actually go so far as to refer to enrichment programs as "busywork and irrelevant" (Rimm & Lovance, p. 100). Daurio (1979) has argued that there are no research studies to show that enrichment is superior to grade-skipping (Brown, 1993, p.2), and Kulik and Kulik (1984), who are in favour of the benefits of grade-skipping conclude their discussion with, "paradoxically . . . programs of enrichment and grouping are more popular (p.86)."

Table 1 - Variations of Accelerative Options

Option	Definition
Early entrance to school	a gifted child who shows readiness to perform schoolwork enters kindergarten or 1st grade one or two years earlier than usual beginning age
Grade skipping	a learner is double-promoted to bypass one or more grade levels
Nongraded classroom	a learner is placed in a classroom undifferentiated by grade levels where he or she works through the curricular materials at a pace appropriate to individual ability and motivational level
Curriculum compacting	the regular curriculum of any or all subjects is tailored to the specific gaps, deficiencies, and strengths of an individual student. The learner tests out or bypasses previously mastered skills and content, focusing only on mastery of deficient areas, thus moving more rapidly through the curriculum
Grade telescoping	a student's progress is reorganized through junior high or high school to shorten the time by one year. Hence, junior high may require two years instead of three, or high school may require three years instead of four
Concurrent enrollment	a student attends classes in more than one building level during the school year - for example, high school for part of the day and junior high for the remainder
Subject acceleration	a student bypasses the usual progression of skills and content mastery in one subject where great advancement or proficiency has been observed The learner will progress at the regular instructional pace through the remaining subject areas.
Advanced placement	a student takes courses with advanced or accelerated content (usually at the secondary level) in order to test out of or receive credit for completion of college-level coursework. (Although one such program is actually designated "Advanced Placement," several such programs exist - for example, International Baccalaureate)
Mentorship	a student is placed with a subject matter expert or professional to further a specific interest or proficiency, which cannot be provided within the regular educational setting
Credit by examination	through successful completion of tests, a student is allowed to receive a specified number of college credits upon entrance to college. (Advanced Placement and the College Level Examination Program are two examples.)
Early Admission to College	a student enters college as a full-time student without completing high school

Howley (1987) provides guidelines to follow when setting up an accelerated program for gifted students that are outlined in Table 2 (pp. 33, 40).

Guidelines for setting up an Accelerated Program
1. build support for acceleration from principals, teachers, students and parents 2. give administrators and teachers sufficient time and appropriate means to develop plans for accelerated students 3. provide in-service-training -- inform educators of research findings on acceleration 4. help students through the adjustment period -- keep in mind students might feel out of place in a new social environment.

Table 2

No matter what the personal preference of an educator is, the one tenet that all researchers assent to is that acceleration must be an individual decision, tailored to meet the needs of a gifted individual.

Identification of Children for Early Entrance

Most requests for early entrance come from parents or preschool teachers. Historically, requests from parents have been primarily made by those who do not have access to affordable day care, or those of higher socioeconomic groups. Preschoolers from families of higher socioeconomic status often exhibit precocious verbal skills or reading readiness that is a result of an enriched home or preschool environment. These children are often ready for a more structured academic environment earlier than their peers.

Much of the early research included all early entrance children, rather than those who were

carefully selected. It is evident that children who entered early to prevent day care costs are not necessarily academically (or emotionally) ready.

Several researchers and parents of gifted children have suggested observed behaviours believed to be consistent with giftedness. These, coupled with testing measures should help in the selection of early entrants. Characteristics such as attention span and motivation are two behaviours of paramount importance. Motivation may be measured by testing. One such recommended test is the Motivational Characteristics Scale of The Scales for Rating Behavioral Characteristics of Superior Students (Renzulli, Smith, White, Callahan & Hartman, 1976). Sample characteristics are presented in Table 3 (Callahan & Hunsaker, 1992, p. 51).

Motivation Scale Sample Items
1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion.
2. Is easily bored with routine tasks.
3. Needs little external motivation to follow through in work that initially excites him.
4. Strives toward perfection; is self-critical; is not easily satisfied with own speed or products.
5. Prefers to work independently; requires little direction from teachers.
6. Often is self-assertive (sometimes even aggressive); stubborn in beliefs
7. Likes to organize and bring structure to things, people, and situations.

Table 3

The top ten qualities listed by parents of gifted children in Seattle are provided in Table 4. Williams (1988) adds the characteristic of being highly imaginative.

Descriptions of Giftedness Provided by Parents of Gifted Children
1. originality
2. sociality -- as measured by leadership qualities, social cognition, advanced moral reasoning, etc.
3. individuality
4. a strong personal need for a conducive environment which supplies physiological, belongingness, and recognition needs
5. self-direction
6. self-realized individual--as described by the characteristics of breadth of knowledge, interest and awareness
7. motivation for further intellectual challenge
8. intellectual precociousness
9. self-consciousness as related to intellectual acquisitiveness and conformity
10.curiosity

Table 4 (Buckley, 1994, p.215)

Robinson and Weimer (1990) include a list of issues related to the child's environment to be considered along with cognitive, emotional and physical skills' criteria when selecting candidates for early entry (Table 5).

Table 5 - Issues Relating to the Child's Environment
1. family relevant issues such as family stresses, expectations and cultural background, family involvement, support and personal resources
2. availability of other options, such as another year of preschool (would this be beneficial to the child?), or grade-skipping and other accelerative future options
3. system relevant issues such as legal standards, and common practises of the school system, local versus national test norms and levels of competence, openness and flexibility of the school system

Proctor, Feldhusen and Black (1988) maintain that educators fear early entry because of the precedent that may be resultant. To alleviate this enigma, they have designed specific guidelines that they contend, if followed, will provide entrance for only those gifted children that are indeed ready (Table 6).

Guidelines proposed by Proctor Feldhusen and Black
1. A comprehensive psychological evaluation of the child's intellectual functioning, academic skill levels, and social-emotional adjustment undertaken by a psychologist.
2. If the school requires a minimum IQ, a differential requirement could be enforced for children within six months of the normal entrance age. For example, three months from the age limit an IQ of 125 could be used, within six months of the age limit, an IQ of 130 or higher could be used. If a minimum IQ is not required, the child should have the level of mental development above the mean for the grade that he or she wishes to enter.
3. Academically, the child should demonstrate skill levels above the mean of the grade desired.
4. Socially and emotionally, the child should be free of any serious adjustment problems. Additionally, the child should demonstrate a high degree of persistence and motivation for learning.
5. Physically, the child should be in good health. The child's size should be considered only if competitive sports may be viewed as important in later years.
6. The psychologist should determine that the child does not feel unduly pressured by the parents to advance.
7. The receiving teacher or teachers must have positive attitudes toward the acceleration and be willing to help the child adjust to the new situation.
8. Judgments about a precocious child's maturity should include input from parents and the psychologist.
9. Grade advancement should occur at natural transition points, such as the beginning of a new school year. However, mid-year advancements have the advantage of the new teacher and the teacher the child is leaving being more easily able to confer to make a smooth transaction.
10. All cases of grade advancement should proceed on a six week trial basis.
11. Care should be exercised not to build up excessive expectations from grade advancement. The child should not be made to feel he or she is a failure if it does not go well.
12. Grade advancement decisions should be based on fact not myth. The research literature shows that acceleration contributes to academic achievement. No negative effects on social or emotional development have been identified. Adjustment problems, if present, tend to be minor and temporary in nature.

Table 6 (Feldhusen, Proctor & Black, 1986; Proctor, Feldhusen & Black, 1988; Feldhusen, 1992)

It is apparent that early entry has many acceptable means of evaluating candidates. A combination of suggestions by the researchers should allow educators to make a well qualified informed decision.

Selection Guidelines for Grade-Skipping and other Accelerative Options

Children who are well behaved, earning excellent grades and exhibit test levels well above their grade level are easily identified as candidates for acceleration. The students that are often missed are those who display behavioural problems and under-achieving children. Feldhusen (1992) suggests that parents will often notice that their child's behaviour has become inappropriate, or that they are becoming bored in school as motivation is lost.

A series of tests including IQ, end of book, and/or underachievement could be administered to the student. If the aptitude is shown to be above the achievement level, the student could be subject advanced to determine if grade-skipping is a viable option. Symptoms of underachievement have been described as disorganization, unfinished assignments, and mild behaviour problems. It has been reasoned that acceleration should take place as soon as possible to prevent the possibility of boredom and under-achievement. Researchers have conclusively shown that acceleration may be used to reverse under-achievement (Rimm & Lovance, 1992).

Educators must be aware of the students who are typically eluded in selection criteria. These students were identified in 1989 by the president-elect of the Council for Exceptional Children as "students from culturally different backgrounds, students with handicapping conditions, students from sparsely populated areas and gifted girls" (Parke, 1989 as cited in Brown, 1993).

Clearly, for acceleration to be successful, the candidate must be in favour of the option, and the receiving teacher must be supportive. Consequent to acceleration, ongoing evaluation must occur. The student's homework must be monitored, and social and/or emotional problems must

be rectified as soon as possible. Inattention in class may be indicative of lack of skills or social ineptness. An overall evaluation regarding appropriate placement should take place approximately six weeks after acceleration.

Opponents to Acceleration

The greatest opposition to acceleration comes primarily from educators. The research is clear that the concerns of educators are unfounded. Gallagher (1969) suggested that in order to bring acceleration to the academic forefront, "perhaps what is needed is some social psychologist to explore why this procedure is generally ignored in the face of such overwhelmingly favorable results" (Kulik & Kulik, 1984, p. 86).

It has been suggested that educators tend to scrutinize behaviours of accelerants more closely than regular aged students. A behaviour that might be considered within the norm for a young child becomes labeled as immature when it is exhibited by an accelerant.

Notwithstanding, the main concerns of educators will be confronted and each evaluated on its own merit. The first concern that is often mentioned is the social and/or emotional outcomes of accelerated students. Research supported evidence of positive outcomes has been described on pages five to ten of this paper. The second concern that is widely held is that of academic 'burn-out'. Longitudinal studies undertaken by Swiatek (1993) surveyed accelerants at ages 18, 23 and 33. The results emphasized that rather than burn out academically, gifted accelerates complete college and attend graduate school in numbers that exceed the national average. In addition, the surveys revealed that over 90% of students that were accelerated in mathematics planned to major in math or science at college (p. 122).

The third area of concern is the apparent gaps in knowledge that are a result of grade-skipping. Lynch (1994) asserts that although there is probable reason for concern that gaps will occur, gifted students learn quickly and will easily conquer this problem. However, since grade-skipping is an attempt to bring gifted students up to pace with prior knowledge and aptitudes, the gaps are probably minimal. Evaluation of progress by the teacher will provide early identification of any gaps that require additional clarification for the student. Studies verify that

accelerates perform well in later years, affirming the contention that gaps in knowledge are easily overcome by gifted students (Swiatek, 1993).

An interesting study was undertaken by Southern, Jones and Fiscus (1989). This study delved into the attitudes of educators toward acceleration.

Surveys were mailed to 1263 practitioners in northwestern Ohio. The selected group comprised elementary school principals and teachers, coordinators of gifted programs, and school psychologists. By the specified deadline date 554 surveys had been returned. The survey included attitudes towards acceleration measured on a Likert scale. The Likert scale items had an estimated internal consistency of 0.937. The results of the study showed that most concerns were related to social and emotional adjustment, with few concerns of academic achievement and leadership qualities (Tables 7 & 8) (p.33). Personal experience with acceleration tended to yield more positive attitudes toward it.

Questions Generating the Greatest and Least Opposition to Acceleration

Question	percent in opposition to acceleration	percent in favor of acceleration
Accelerants will miss important social interactions.	77.8	22.2
Acceleration is not as suitable as enrichment for gifted students.	73.1	26.9
Accelerants will be deprived of necessary early childhood experiences.	65.2	34.8
Acceleration will cause stress and lead to problems of emotional adjustment	64.0	36.0
Accelerants will not do well in the new classrooms because of increased academic competition	27.4	72.6
A high level of academic demand will later lead to diminished performance	29.4	70.6
Accelerants tend to be less reliable than precocious children who remain in elementary classrooms with their same age peers.	32.3	67.7
Chronological age is a more important consideration than the level of academic achievement when planning educational programs for gifted students.	34.8	65.2
Elementary school accelerants will not learn leadership skills.	35.6	64.4
Accelerating a gifted child places too high a level of academic demand on the child.	35.4	64.6

Table 7

Effects of Experience with Acceleration on Attitudes Toward Early Admission, Grade Skipping, and Remaining with Age-level Peers				
	Experience		No Experience	
	n	%	n	%
1. Is early admission harmful?				
Yes	8	38.1	22	73.3
No	10	47.6	2	6.7
DK	3	14.3	6	20.0
2. Is grade skipping harmful?				
Yes	11	52.4	22	75.8
No	8	38.1	4	13.8
DK	2	9.5	3	10.3
3. Is keeping the bright student with same age peers potentially harmful?				
Yes	11	52.4	22	73.3
No	7	33.3	4	13.3
DK	3	14.3	4	13.3

Table 8

Approximately 10% of the respondents were randomly selected for a follow-up telephone interview. The respondents were asked to cite relevant literature on acceleration. Many respondents were aware of early literature that argued against early entrance, and several were able to cite authors by name. However, few were aware of the vast numbers of studies that supported acceleration, and none could cite a single author or study that supported it. Southern et al. (1992) concluded that although much literature exists that corroborates acceleration, obviously practitioners have not been made aware of it.

Access to Acceleration Programs

Evidently, acceleration is not very accessible throughout the Canada and the United States. Surprisingly, many school boards will allow a student to start kindergarten or grade one a year after the normal age, but will not allow early entrance. Cramond (1990) recounts her experience in the United States with a daughter who displayed precocious behaviours, but was six weeks too young to enter school. The Cramonds had to submit their daughter to several time-consuming and expensive tests to prove that she was ready for school. They were alarmed to discover that if one suspects their child of having a learning disability, the educational system will pay for testing; however, if advanced intellectual aptitude and behavioural skills are apparent, it is the parents' responsibility to pay for testing.

A similar case occurred in Manitoba, Canada in 1994. A four year old boy was 26 days too young to enroll in kindergarten. His parents spent $1,000.00 for a psychological assessment that showed the child to be academically and socially mature beyond his age. The request for early entrance was denied by educational staff who had not read the psychological report, but claimed that research is conclusive that children who begin school early encounter social and psychological problems later in life. An appeal brought a reversal to the initial decision (Santin, 1994).

The Sayler and Brookshire (1993) study of eighth grade students in the United States could only identify 1.3% of grade eight students as accelerated. Cox et al. (1985) found that between nine and sixteen percent of schools surveyed allowed either moderate or radical acceleration of students. However, it is the contention of Sayler and Brookshire that very few students in those schools are ever accelerated (Sayler & Brookshire, 1993, p. 153).

Feldhusen (1992) suggests a way of counteracting a school system that is inflexible on their entrance age requirement. The precocious student could be enrolled in private school for a year

or two, and then transferred back to the public school system, where the child will not usually be retained based on chronological age.

Harris (1981) sums up the access issue with the following statement. "despite all of the positive evidence in favour of acceleration, hardly anyone does it. There is a very definite conflict between what the literature reports on acceleration and what is actually implemented in the schools" (Brown, 1993, p.2). Acceleration has been an option that has been in and out of vogue for several years, but according to some researchers, it is often an option of last resort. According to Quinn (1992), acceleration is the seventh most common of ten types of gifted education offered to Canadian students. Less than 40 percent of school boards who purportedly offer gifted programs uses a form of acceleration, as compared to 95 percent who prefer to use a form of enrichment. (Brown, 1993, p.2).

Discussion

Much research has been conducted on the subject of acceleration. A review of the literature has furnished the following conclusions:

- Academic outcomes of acceleration are positive.
- No carefully executed research has been concluded that implies negative social and/or emotional outcomes of acceleration of gifted children.
- Gifted children that are not intellectually stimulated and challenged may become under-achievers and not fulfill their potential.
- Acceleration is not widely used throughout Canada and the United States.

In view of the literature findings, myths regarding acceleration must be obliterated. Educators should be made aware of the facts, and acceleration should be included as an option for realizing the needs of gifted children.

Future research could be conducted to investigate the academic, social and emotional outcomes of children who were not accelerated, and who were identified as under-achieving throughout their academic careers.

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