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Acceleration as a qualitatively differentiated educational program for the highly gifted learner: Its positive and negative effects

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Abstract

The provision of special educational opportunities for the most gifted members of our society is not a new idea. As early as the Fourth Century, B.C., Plato remarked in his Republic that society's task was "to compel the best natures" to provide education in order to ensure the survival of Greek democracy. The common good would best be served, he felt, by providing educational advantages for the most distinguished learners in order for them to eventually assume leadership positions. Such a desire for the optimum development of gifted potential has been an underlying reason for the return of the pendulum swing to special attention for the education of gifted learners after a period of neglect.

ACCELERATION AS A QUALITATIVELY DIFFERENTIATED EDUCATIONAL PROGRAM FOR THE HIGHLY GIFTED LEARNER: ITS POSITIVE AND NEGATIVE EFFECTS

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CHAPTER 1

INTRODUCTION

Introduction to the Problem

The provision of special educational opportunities for the most gifted members of our society is not a new idea. As early as the Fourth Century, B.C., Plato remarked in his Republic that society's task was "to compel the best natures" to provide education in order to ensure the survival of Greek democracy. The common good would best be served, he felt, by providing educational advantages for the most distinguished learners in order for them to eventually assume leadership positions. Such a desire for the optimum development of gifted potential has been an underlying reason for the return of the pendulum swing to special attention for the education of gifted learners after a period of neglect.

The educational community has long agreed that it is the right of all students to experience a continuous intellectual challenge equal to their varied talents and abilities (Lindvall, 1962). However, because of societal pressure for equal education of all students, as well as sporadically renewed interest in non-cognitive factors inherent in various educational experiences, special education for gifted learners historically has been both extolled and debased.

The 1970s and 1980s have witnessed the return of gifted education to its position of respect among many present day

educators. They believe that each individual student needs to be provided with an educational experience which will best develop potential, both for personal self-fulfillment and for individual contributions to society. Because of the tremendous variety of abilities and needs among all learners, they further believe that the educational needs of all are best served by providing qualitatively differentiated learning experiences.

Presently 75% of the public school districts in the State of Iowa provide a special educational structure for academically gifted students. Thus far, the programs developed by those districts have been one of or a combination of two general program options: (a) enrichment, and (b) acceleration (L. Wolfe, personal communication, May, 1989).

Enrichment as a Program Option

Enrichment is the providing of experiences for the gifted child which are not usually encountered in the ongoing school curricula (Jordon & Grossi, 1980). It is often used to supplement the work completed in the regular classroom while allowing the child to remain with his/her age peers. Students participate in activities which increase interest and ability for later self-directed studies.

Enrichment may take two forms: (a) vertical, or (b) lateral. Vertical, or intensive enrichment, encourages a student to specialize in a given area of study and to work at a more mature level than the average student. This form is most concerned with

the depth of study. An example of vertical enrichment is to encourage a child who has studied weather in the regular classroom to build and operate a miniature weather station. Horizontal, or lateral enrichment, has as its purpose to broaden the experiences of the gifted student beyond those provided for the average child. This form is most concerned with the breadth of study and with the even development of a child's talents. The study of French in gifted classes would be an example of horizontal enrichment (Lewis, 1960).

The most common reason for the selection of the enrichment option is its somewhat stable and permanent grouping system which allows for the even progression of personal and social adjustment and growth (Lindvall, 1962). Care must be taken, however, to ensure that enrichment programs are functional, not just decorative (Khatena, 1983). Students must be able to receive long-term benefit from their studies rather than simply short-term enjoyment. Enrichment may take the form of homogeneous grouping, special pupil projects, supplemental learning kits, special subject matter units, programmed learning, teaching machines, mentorships, or small or large group activities (Rice, 1970).

Acceleration as a Program Option

Conversely, acceleration allows a student to move through the regular grade level curriculum at a faster rate of progress than the average student. While acceleration is often regarded as a form of enrichment, for the purposes of this paper, these

two program options will be considered as separate. The underlying assumption of acceleration is that there is nothing sacred about the placement of subjects within a grade structure which presently is based, to some degree, on tradition (Lindvall, 1962). Acceleration, a technique used primarily to shorten the length of time gifted students find themselves in an educational setting, (Gallagher, 1985), may be achieved through one of many different program options: (a) ungraded classrooms, (b) utilization of summer school, (c) early entrance, (d) grade combinations, (e) high ceiling curriculum, (f) advanced placement, (g) extra loading, and (h) flexible progression (Rice, 1970; Gallagher, 1985).

Ungraded classrooms make it possible for a highly gifted student to advance through subject matter at his/her own pace. Grade level barriers become immaterial. Depending upon how rapidly a student develops and masters skills, fourth grade may be entered after leaving kindergarten in from one to four years (Rice, 1970).

Summer school sessions may be used by gifted students as grade substitutions. For example, a student might complete second grade in the spring and enter fourth grade in the fall after attending a bridging summer session (Rice, 1970).

Early entrance allows a highly gifted preschooler to begin formal education before the year set by common birthdate requirements. In studies reported by J. W. Birch and D. A. Worcester, some highly gifted students have demonstrated their readiness to begin school at an earlier age. One advantage of

this initial early admission is that it does not involve any skipping of curricular content. In one research study, 316 out of 4,275 children in grades K-5 had been admitted early on the basis of test scores. Teachers rated these children on their achievement, health, coordination, acceptance by others, leadership, attitudes toward school, and emotional adjustment. None of the early entrants were found to be at a disadvantage. In fact, they were rated above the students in the regular entrance group (Reynold, 1960).

Grade combining makes it possible for a student to complete two years of study in one year. For instance, the junior high school years can be shortened by reducing the seventh, eighth, and ninth grade programs into two years. This option makes it possible to combine the entire seventh and eighth grade curricula into a one year segment. It also makes it possible simply to combine within a subject area. For instance, seventh and eighth grade English might be compacted into a one year unit of study.

A high ceiling curriculum is one which makes it possible for gifted pupils to utilize materials two or more years in advance of actual grade level materials. In such a program, teachers document levels and notify next level teachers in order to avoid duplication of materials. This option is often used by school districts which hesitate to accelerate pupils by advancing them in actual grade level (Rice, 1970).

Advanced placement is one further form of acceleration. This option allows high school students to receive college credit prior to their admission to an institution of higher learning. Courses specifically arranged and taught by accredited teachers make it possible for students to study college level material while in high school thus alleviating the need to take equivalent courses while in college (Paulus, 1984). According to Reynold (1960), this accelerative method of meeting the needs of the highly gifted student lessens the duplication in college of work completed in high school, and it increases the opportunity for students to take more advanced work in college.

Extra loading is allowing a high school student to take more classes than are usually permitted in the high school setting. For example, a student might take two math classes in one year in order to move ahead of age mates, thus allowing time for individual study, advanced placement, or college credit courses while still in high school (Gallagher, 1985).

Flexible progression, often referred to as grade or level skipping, permits certain students to make an early advancement to a higher level in one or all subject areas once competence has been demonstrated. An eighth grader proficient in the area of mathematics may be accelerated to Algebra I before advancing to the ninth grade. Thus, flexible progression provides learning experiences directly related to the student's own learning pace, not the pace of his/her age peers. It also provides challenges

of a deeper nature rather than more-of-the-same drill, free-reading, or housekeeping chores/activities with a questionable degree of relevance and value to the gifted child (Paulus, 1984). While most commonly an option for junior and senior high schools, subject level flexible progression may be an option for qualified elementary students (Rice, 1970). In such a situation, a gifted third grader could participate with a fifth grade class in mathematics once it was demonstrated that the student had mastered the third and fourth grade curriculum. Additionally, flexible progression makes it possible for highly gifted students to skip a complete grade level. A student may, for example, leave fifth grade in the spring and return to seventh grade in the fall. This option is rarely used; yet it warrants further investigation before dismissing it as a possible program option.

Statement of the Problem

It is apparent from the previous discussion that many program options are available for school districts concerned with meeting the educational needs of highly gifted students. Enrichment and acceleration each offer numerous methods for providing qualitatively differentiated educational experiences for highly gifted students. In Iowa, enrichment is used more often than acceleration. While that option may be of value in enriching the education of gifted students, there is a question as to when districts should begin to consider the option of accelerating gifted students through

the school system. What is hindering districts in Iowa, and in school districts across our nation, from seriously examining acceleration as a viable program option?

Iowa educators are now examining gifted programming. By 1990-91, all school districts in the state will be required to have a K-12 gifted program, and it is becoming increasingly important for teachers and administrators to be aware of the various program options. Careful examination of acceleration at this time would benefit district personnel as they begin to develop new gifted programs. It is the purpose of this paper to review and organize historical and current significant research concerning acceleration as a effective qualitatively different educational program for the highly gifted child. In order to accomplish this, the writer will address the following questions:

1. From an historical perspective, to what extent has research shown the acceleration option to be an educationally effective strategy for meeting the needs of the highly gifted learner?

2. What does the literature present as the positive and negative effects of acceleration as a program option for the highly gifted learner at the elementary and secondary levels?

Definition of Terms

For the purposes of this review of literature, the terms below will be defined as noted:

1. Highly gifted learner--According to the U. S. Office of Education definition, highly gifted learners are children identified by professionally qualified persons, who by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to society (Clark, 1979).

2. Acceleration--Acceleration is a program option which is used to shorten the period of time that gifted students spend in the traditional educational setting (Gallagher, 1985).

Limitations

This review of literature will be conducted from an historical perspective. It will be limited to an examination of acceleration as a viable program option for meeting the educational needs of highly gifted learners at the elementary and secondary levels.

CHAPTER 2

ACCELERATION AS A GIFTED STRATEGY: AN HISTORICAL PERSPECTIVE

The concept of providing special academic facilities for the education of gifted youth dates back to classical times. Plato (428-347 BC) recommended that the responsibility of leadership be placed into the able hands of the philosopher--kings who would be, he believed, endowed with the greatest degree of rational thought. As he urged the training and education of the most able youths to prepare them for leadership roles, he speculated on appropriate means of talent identification (Angelino, 1960).

Plato's ideas were assimilated by the Romans into their culture. They trained specifically identified youths to become leaders in war and in politics (Angelino, 1960). The Emperor Charlemagne (742-814) is believed to have urged the education of promising children at state expense (Hildreth, 1966).

One of the most notable educational experiments in history took place during the fifteenth century. Mehmet the Conqueror, a Turkish sultan, founded a palace school in Constantinople for the tribute children of the conquered Christian nations. He sent emissaries throughout the nation to select the fairest, strongest, and most intelligent boys without regard to their social classes. The purpose of this school was to create "fine minds in hardened bodies." The most able graduates of this school were put to work

in high government posts, and this is believed to explain the rise to power of the Turkist Empire during the fifteenth and sixteenth centuries (Hildreth, 1966).

In the sixteenth century, a Mohammendan ruler had the strongest and most intelligent youths selected for training as leaders (Angelino, 1960). During the Renaissance and Reformation as well as during the Industrial Revolution two centuries later, intellectual superiority was highly regarded as one type of leadership (Angelino, 1960). Comenius, writing in the seventeenth century, often made references to students of unusual ability for learning, and he advocated financial assistance for bright students from lower economic classes (Hildreth, 1966).

Although respect and training for gifted achievers existed throughout these many centuries, the view that it was the responsibility of the educational systems to identify and nurture the gifts and talents of these youth was not widely accepted. Therefore, there were no provisions built into the curricula of early educational facilities to help enable young gifted learners to achieve their potentials (Angelino, 1960).

Systematic education of highly gifted youth continued to be virtually nonexistent in America during the seventeenth and eighteenth centuries. The philosophy that "all men are created equal" made it unthinkable to give special attention to individual differences (Angelino, 1960). This attitude was generally reflected in the school curricula of the times. However, notable exceptions

existed in both Europe and the United States. John Donne, the English metaphysical poet and clergyman, attended Oxford University in 1584 at the age of eleven or twelve. His classmates ranged in age from twelve to twenty-four. Clergyman and writer Cotton Mather graduated from Harvard in 1679 at the age of sixteen. Jonathan Edwards, the American theologian, graduated from Yale at sixteen years of age in 1719. In 1777, a six-year old and a thirty-year old were classmates at Phillips Academy in Andover, Massachusetts (Paulus, 1984). Even though these exceptions existed, the use of acceleration as an educationally effective strategy for the highly gifted student was not common.

During the late 1700s, Thomas Jefferson indicated a desire to educate the most promising students with public funds. He proposed a bill for the "Diffusion of Education" which would provide for the education of gifted students at public expense at a university where they would be trained in the arts and the sciences and where they would be trained in leadership skills. He stated in his Notes on the State of Virginia, "The best geniuses will be raked from the rubbish annually and sent to William and Mary College at public expense" (Hildreth, 1966, p. 43). He continued, "We hope to avail the state of those talents which nature has sown as liberally among the poor as the rich, but which perish without use if not sought for and cultivated" (Gallagher & Weiss, 1979, p. 11).

Interest in gifted youth was concentrated on the child prodigy for a time; but during the nineteenth century, the rise of scientific interest shifted attention in new directions. The testing movement focused attention on mental variability and provided methods by which giftedness could be appraised. It was at this time that greater attention began to be directed toward special education for the highly gifted. The appearance in 1869 of Galton's Hereditary Genius marked the beginning of an era during which writings attempted to define the origins of superior ability. Among those writings were Galton's English Men of Science (1874), Lombroso's Man of Genius (1891), and Cattell's Statistical Study of American Men of Science (1906-1910). The issue raised by these writings concerned the relative contributions of heredity and education in the production of superior ability. Most nineteenth century thinking endorsed the idea of intellectual equality of all people. This belief stated that differences existed in people solely because of their training. Because of this philosophy, little attention was given to using acceleration or any other educational strategies as a means for meeting the needs of gifted youth.

The scientific study of the gifted in America began in the early years of the twentieth century with the publication of Terman's Genius and Stupidity (1906). At about this same time in France, Dr. Alfred Binet introduced to the field of psychology several important new concepts:

1. Evidence which proved that there existed a general aptitude for learning.

2. The educational significance of general aptitudes for learning.

3. The possibility of measuring general learning ability by using a series of developmental tests.

This final concept was published in the form of a mental test scale.

In 1911 Goodard's revision of this scale appeared in the United States, and it was followed by Terman's in 1916. With the publication of Terman's Stanford Revision of Binet's scale, a tool was now available by which highly gifted children could be more accurately identified. This scale could be used for comparative ratings, and it was relatively free of subjective observational biases (Hildreth, 1966). These scales demonstrated that superior mental ability could be identified, and they helped to modify the opinions based on the "equality of all men" philosophy. With this new wave of thinking came modifications to the educational system.

By 1915, Dr. Guy M. Whipple, had become interested in the use of mental ability tests as a means of contrasting the abilities of gifted children and slow learners. Through his efforts, the notion that highly gifted children were "queer little freaks" gave way to a fuller understanding that they were a part of the general population of children (Hildreth, 1966).

In 1921, Dr. Terman began a long series of investigations concerning gifted children. He located 1,000 highly gifted boys and girls in California and followed their school and life careers. His follow-up reports were published in 1928, 1945, and in 1955 (Hildreth, 1966).

The large scale use of acceleration as a educationally effective strategy was first practiced in the St. Louis schools in 1867. William Harris, then Superintendent of Schools, required frequent reclassification of students who varied greatly from the rest of their group (Kulik & Kulik, 1984a). Called flexible progression, this procedure allowed promotion every five weeks if justified by achievement thus breaking the lock-step type of educational program.

Other successful multiple-track plans were developed in New Jersey, California, New York, and Michigan (Hildreth, 1966). The Cambridge plan provided two parallel sections in each class. Rapid learners were thereby able to cover six years' work in four years. Within a few decades, additional school systems introduced other forms of acceleration including grade skipping, promotion upon completion of stated work, double track systems, enrichment, combining of grades, and early entrance. Accelerated instruction took hold as an educationally effective strategy for the education of the gifted.

Plans for individualized instruction were also proposed to offset the limitations imposed by uniform curricula and texts.

Frederic Burk, Superintendent of Schools in San Francisco in 1912, became the forerunner of programs offering individualized instruction. Dr. Carleton Washburne initiated a similar program in Winnetka, Illinois, just a few years later (Hildreth, 1966).

As school systems continued to adjust their programs to include materials for accelerated pupils, research studies concerning their traits and needs became more common. The characteristics of approximately fifteen hundred youngsters with IQ's ranging from 140 to 200 were studied in the early 1920s. The results of this study were reported in Terman's Genetic Studies of Genius, and that report became the core of the current scientific knowledge about the intellectually gifted. Hollingworth's monograph Gifted Children (1926) offered a general summary of the study of giftedness. Knowledge concerning the highly intellectually gifted continued to grow as additional studies were conducted (Angelino, 1960). One such study took place in Cleveland, Ohio, in 1921. The goal of this study was to locate highly gifted students, separate them from the average and low ability learners so as not to impede their learning rate, and train them for leadership roles. By 1940, 1,200 gifted children were enrolled in seventeen of Cleveland's Major Work centers (Hildreth, 1966).

Shortly before and after World War II, however, there developed increased concern about the then-common practice of grade skipping. Acceleration was poorly implemented; for, while students were moved ahead, they were not receiving adequate support services.

Furthermore, teachers and administrators did not receive sufficient inservice training. The reputation for acceleration was further damaged by reports from the Gesell Institute located in New Haven, Connecticut. This center for clinical and child development conducted a study based on the philosophies of pediatrician and physiologist Dr. Arnold Lucius Gesell who proclaimed that children have "immutable developmental needs (especially emotional needs) that depend on their ages. If parents and teachers were to ignore these needs by placing gifted students with older children, the accelerated students would suffer" (Howley, 1987). The growing question was whether the social and emotional growth of the promoted child might be affected negatively. Added to the "emphasis on egalitarianism and on equal opportunity for all..., the commitment of the schools to special provisions for the gifted declined" (Gallagher & Weiss, 1979, p. 16).

By 1948, less than one percent of larger school systems described their programs as employing some kind of ability grouping. This reflected "a retreat from earlier attempts to establish identifiable special classes and schools" (Gallagher & Weiss, 1979, p. 15).

It was also during the post-World War II years that Americans began to feel a sense of security then possessed by few other nations due to their unchallenged nuclear superiority. However, with the launching of Sputnik in 1957, it became clear to the free nations that the Soviet Union could now deliver a nuclear

attack. This revelation caused the United States to search for resources to regain a competitive edge. The familiar question of the time was, "How did the Russians get ahead of us?" Studies of the school systems revealed the need to offer special programs for academically accelerated students after they were found to be lacking in the areas of mathematics and the physical sciences.

Intensive and challenging curricula were developed and put into practice in a variety of ways. New curricula were written in practically every content field, and creativity and creative thinking became stated educational objectives. Special classes were offered which allowed academically accelerated students to learn at an appropriate rate with children of similar mental abilities. In addition, modified special classes allowed the students to spend only a portion of the day with specially trained teachers and intellectual peers, while also spending time with age peers. Additionally, the mentor approach to gifted education, Saturday and evening courses, and summer programs were developed and instituted into public school systems.

Acceleration, however, was not immediately accepted by everyone. Terman and Oden (1947) acknowledged the controversy concerning the extent to which academically gifted children should be accelerated. They noted the two extremes of the issue. At one end was the opinion that gifted children should be given grade placement corresponding to their mental ages. At the other extreme, educators held that promotions should be based on the calendar

without regard for mental abilities. They recommended an alternative: special classes which offered an enriched curriculum. Cited were examples of such programs which had existed for two decades. They stated, however, that such programs often amounted to little more than a quantitative increase of work at the usual level. They stressed that while this may keep the child out of mischief, it is not educational. They concluded that if a child's intellectual welfare were the sole criterion, promotion should be based on mental age.

However, it was at this time that concern with a child's social adjustment also was becoming a major element in the decision of whether to accelerate. Terman and Oden (1947) insisted that their data indicated that the risk of maladjustment was less than commonly believed. They noted that the disadvantages of acceleration mentioned by their research subjects were usually temporary. They suggested that the handicaps of social immaturity among accelerated students would be less if a larger proportion of academically accelerated students were promoted since, in that case, the under-age child would not feel so conspicuous. It was their conclusion, based on studies and research, that children of 135 IQ or higher should be promoted in order to permit entrance to college by the age of at least seventeen.

A study conducted and reported by Harvey Lehman in 1953 further demonstrated the need for special provisions for the academically accelerated student. He researched the portion of an individual's

life which represents the most productive years. The technique used by Lehman was to assemble a panel of outstanding scholars or performers in various fields of study and to secure a listing of persons whom they regarded as the great men and women in their areas. In the same way he secured a judgment of the outstanding works of these eminent people. Lehman then attempted to relate productive and creative output to the age each of each individual. In the areas of the physical sciences, mathematics, and inventions, the average ages at which very superior contributions were made ranged from 26 to 39. Similarly, advances in the biological sciences occurred between the ages of 30 and 39. These findings were repeatedly confirmed. Outstanding contributions in the form of musical compositions, literary works, philosophy, the social sciences, and art were all made between the average ages of 30 and 45. Lehman's study resulted in the conclusion that "genius does not function equally well throughout the years of adulthood. Superior creativity rises relatively rapidly to a maximum which occurs usually in the thirties and then falls off slowly" (Gold, 1965, p. 332). This study helped to further promote the idea of acceleration, early entrance to college, and thus an early entrance to work in the area of choice.

In 1947, after a term of service abroad, Dr. James B. Conant warned United States citizens that they were in danger of losing their status as a world leader unless more concern was shown for the training of all promising youths for careers in science. In

his Conant Report in 1959, a major statement on education, he reaffirmed the need for flexibility, especially for the academically talented. Included in that report was a recommendation for acceleration of appropriate students (Paulus, 1984).

The early 1960s was a special period of interest in the gifted due in part to the special role that identifiably gifted persons played in the political life of the United States. "Kennedy gathered around him some of the most precocious men . . . of his generation to advice him on governmental matters. Known then as the 'Whiz Kids,' some had earned their reputations as scholars at leading universities and others as promising idea men in industry" (Gallagher, 1981, p. 138).

Following the assassination of President Kennedy in 1963, the United States became involved in the tremendous tasks of finding solutions to two major problems which occupied the nation for the next two decades. These problems included the Vietnam Conflict and the civil rights movement. Alleviating the plight of the inner-city ghettos became a national priority. It was believed that the only way to rectify the situation in the ghettos was to make an enormous public investment in upgrading the education, housing, and employment opportunities of those affected. Schools could no longer afford special opportunities for the gifted. Moreover, socially disadvantaged students were poorly represented in gifted programs, so conventional means of identifying highly gifted children were condemned as discriminatory.

The decline of attention to the gifted in the 1960s is observable by noting the number of professional publications on that subject at the beginning and end of the decade. The number of entries under "Gifted Children" in the 1970 volume of The Educational Index was less than half the number as that in the 1960 edition (Barbe & Renzulli, 1975).

There began, then, in the 1970s, a revival of interest in the gifted. Probably the biggest boost came from a 1970 Congressional mandate that added Section 806, "Provisions Related to Gifted and Talented Children," to the Elementary and Secondary Educational Amendments of 1969. This document was important because it demonstrated a decision to include gifted children among those benefiting from Titles III and V of the Elementary and Secondary Act. In addition, it directed the commissioner to determine the extent to which special assistance programs were useful in meeting the needs of gifted students, evaluate how federal education assistance programs could be used more effectively in meeting the needs of the gifted, and to recommend new programs to meet those needs (Barbe & Renzulli, 1975).

More recently, in 1983, the Commission on Excellence in Education identified talented and gifted youth as a key group of students for which the federal government has a special responsibility. Although the Commission did not specify the kinds of programs that would be best for gifted students, it did recommend that placement of students should be guided by their academic

ability and instructional needs rather than strictly by age (Kulik & Kulik, 1984b).

While the literature concerning the historic use of acceleration was not abundant, it was sufficient to draw the following conclusions. First, the researcher has found that the use of acceleration as an educational effective strategy for meeting the needs of highly gifted students can best be described as cyclical; special provisions for gifted academic learners may exist one decade and be absent the next only to appear again at a later date. Second, acceleration has not been and continues not to be a popular strategy for meeting the needs of highly gifted students. When implemented, it is most often used hit and miss, for at no time in history has acceleration been widely accepted as an educationally effective strategy. Third, depending upon the interests of society, special provisions for highly gifted learners may be affected either by developmental processes or by elimination of already existing programs.

CHAPTER 3

POSITIVE AND NEGATIVE EFFECTS OF ACCELERATION

Introduction

In our society, there tends to be an ambivalence about the gifted and talented. On one hand, the gifted individual who has risen from a humble background is revered. The need to educate the most able is recognized in order for them to become the thinkers and achievers of the future. On the other hand, the birth of our nation was built upon confrontation with an aristocratic elite. There is a strong commitment to egalitarianism; we do not wish for a new elite class to develop (Kulik & Kulik, 1984a).

As a result, attitudes waver. Elementary and secondary school programs for gifted students are developed in ways that can be defended by careful administrators who can be perceived as giving no special favors and thus not favoring the powerful or specially endowed (Gallagher & Weiss, 1979). Thus, the schools are caught in a

> tug-of-war between two legitimate educational goals: excellence on one hand, and equity on the other. This tug-of-war has caused our interest in the education of gifted students to be up some years, down some others (Gallagher, 1985, p. 73).

Supporters of acceleration argue that it enables highly gifted students to work with their mental peers at tasks which match their abilities. Detractors, however, argue that acceleration may have negative effects on the child's emotional and social

growth. Who is right? When a school system considers acceleration as a possible educational option for its highly gifted students, it is faced with a number of possible positive and negative effects, each of which needs to be carefully considered.

Positive and Negative Effects of Acceleration

In this chapter, the researcher has reviewed the literature concerning the positive and negative effects of acceleration when used as an effective strategy for the highly gifted. In doing so, she has determined ten major concerns which have been addressed by those writers/researchers opposed to the use of acceleration in meeting the needs of the highly gifted. They are: (a) acquisition of basic skills, (b) adequate time to reflect on learning, (c) uneven educational development, (d) parental anxieties, (e) financial and professional expenditures, (f) elitism, (g) social and emotional difficulties, and (h) the effect of acceleration on exceptionally gifted students and college years. Following each statement of concern, the researcher has enumerated the work of researchers and writers in the field of gifted education which responds to that concern.

Basic Skills

Opponents of acceleration believe that the gifted child who is allowed to skip a grade or a level within a subject area may miss basic information or experiences gained at that grade or level (Gallagher, 1959). For example, an intellectually gifted

sixth grader still needs to read sixth grade stories with other sixth graders in order to share a common emotional reaction. The reading need not be restricted to those stories, but it must include them (Vail, 1979). They further believe that creativity is exploited and that students are urged to extend their knowledge of specific facts rather than to explore and reflect on general concepts (Kough, 1960).

However, W. Abraham, (1958), a proponent of acceleration, states in Common Sense about Gifted Children that nothing is bypassed or skipped by accelerating a highly gifted student. Much of the work is simply accomplished more quickly when the child is allowed to progress at a more appropriate rate. Paulus (1984) stated that while acceleration may have some drawbacks, it is much more dangerous to do nothing at all for the highly gifted child than it is to accelerate.

Time to Reflect

Another concern of acceleration opponents is that the gifted child requires, as do all children, sufficient time to absorb the experiences of learning and living. The gifted student needs time to reflect upon experiences, absorb learnings, explore new areas of interest, and to develop an appreciation for what is felt or seen. Acceleration diminishes the time needed for such activities (Sumption & Luecking, 1960). Additionally, acceleration alone does not provide the necessary stimulation for gifted

children. In fact, in many cases it fails to provide breadth of experiences (Lewis, 1960).

This argument, however, gives little weight to the fact that the gifted child absorbs so much more than the average youngster from each experience. They do not need as much time for learning skills. They are more sensitive to the values of their experiences and to the implications of their studies. Acceleration proponents believe that an inquisitive mind should be encouraged to explore and to learn rather than languish in some childish activity mistakenly believed to provide rich and full learning (Sumption & Luecking, 1960).

Uneven Educational Development

A further problem with acceleration is related to the student's uneven development. Although a student may be capable of achieving at a higher level in one area, that same student might not be ready for acceleration in all areas. If placed into a more advanced class due to advanced achievement in one or two fields of study, the student might feel pressure to achieve at a higher level in all areas of study (Sumption & Luecking, 1960).

Granted, if placed into advanced classes, the gifted student may be at a higher level in one area than in another; this is typical of all students, gifted or not. Three basic considerations must be examined in this situation.

First, acceleration takes many forms. It may not be necessary for this student to advance in all areas; perhaps advancement may

be made in one or two areas while allowing the student to work with age-mates in the remaining subjects.

Second, stating that the student should not be accelerated due to an average ability in an area of study carries with it a desire for all-around development for every child. According to Sumption and Luecking (1960, p. 201): "it seems quite possible that in insisting upon well-roundedness, teachers and parents may be filing off the very sharp edges that might lead to originality of thought and creative production."

Finally, having to work harder in a particular area of study helps reduce boredom, thus developing a better attitude toward education. Proponents of acceleration point to the fact that advancing students allows them to experience continuous intellectual challenges which help them develop their full potential for learning. It stimulates student learning through continuous cultivation of abilities by use of various rates of progression (Lindvall, 1962). If students consistently achieve with relative ease, poor work habits and loss of interest in school may develop (Sternberg & Davidson, 1986). If students do not have to put forth any effort to remain at the top of their classes, they may become underachievers and will be unprepared to meet the increased competition of college classes (Sumption & Luecking, 1960). Also, boredom with school tasks that require no effort and seem to have no purpose can lead to emotional difficulties. Acceleration tends

to prevent such difficulties from developing (Sumption & Luecking, 1960).

Development of Leadership Skills

A further argument against acceleration is the belief that the accelerated child may be deprived of the opportunities to develop leadership skills when placed in an educational setting with older students (Kough, 1960). It is believed that these students will feel inferior to older students and thus not seek the leadership positions they may have experienced had they remained with their age-mates.

Tuttle and Becker (1980) reported conflicting results from two different studies, one in 1938 and the other in the 1950s. These results indicated that accelerants were superior to non-accelerants in many areas, among them grade point average, awards of scholarships and distinctions, and social leadership skills. They held more class offices and took part in more activities, including athletics, than did non-accelerants (Paulus, 1984).

Parental Anxieties Versus Time Saved

In his second edition of Teaching the Gifted Child, (1975) James P. Gallagher states that the real reason for the strong opposition to acceleration lies in some hidden concerns or anxieties of both parents and teachers. One possible explanation is the premature thrusting of a child out of the parental nest. After all, a child and a parent have a limited number of years together.

Accelerating a child means that the child will leave home one or more years earlier if accelerated.

It must be the welfare of the child, however, not parental preference which must be considered. It is not unusual for a student to spend one quarter of a century in school before beginning a career. Acceleration would aid those students by eliminating wasted hours of unneeded instruction. Julian Stanley, of Johns Hopkins University, states that 25,000 students in each age group reason well enough mathematically to become outstanding engineers, mathematicians, physical scientists, and quantitative social scientists. Those students are able to master Algebra I in fifteen hours. One third of them can master Algebra II, Algebra III, plane geometry, trigonometry, and analytical geometry with only 35 hours of instruction. This is less than 6% of the time normally required to prepare average high school students for calculus. It makes no sense, he contends, to allow youths who have advanced ability to languish in painfully slow-paced courses (Tursman, 1983).

Gallagher in his 1975 edition of Teaching the Gifted Child presents another example of a young women entering the medical field. Typically, she would graduate from high school at 18, college at 22, and medical school at 26. She would then be faced with internship, residency, and specialty training and would not begin her career until the age of 29 or 30. By that time, she would have been physiologically mature for as many as fifteen years, and many of her age-mates would have been gainfully employed

for up to ten years. Any educational adjustment that could reduce this period of time by two or three years would be of benefit not only to that young women, but to her future patients as well (Gallagher, 1985). Maynard C. Reynold (1960) states that time is irrecoverable; if a student enters a profession later than is necessary, there has been a waste.

Furthermore, by being able to begin college, graduate school, and a profession earlier, a young person such as the one cited by Gallagher would have more time and energy for creative pursuits. This would enable him or her to become a happier, more effective citizen (Sternberg & Davidson, 1986)

Financial and Professional Expenditures

Another reason for a school district's negative attitude toward acceleration relates to operational feasibility. The costs associated with professional time and diagnostic testing are not considered feasible by most school systems (Gallagher, 1985). It is the contention of opponents of acceleration that the gifted child should be able to be accommodated well within the regular resources of the school. Elective and honors courses in senior high school should be able to take care of the needs of the gifted child satisfactorily. "Why should our schools provide more for those who already have so much?" is a common question. Any special attention by teachers to gifted students takes time away from another student who, perhaps, needs special help to achieve at age level (Sternberg & Davidson, 1986).

For the classroom teacher, however, acceleration can increase the teachability within the classroom (Hansen, 1964). Rather than dealing with the needs of the very lowest academic achiever up through those of the very brightest learner, acceleration can eliminate one segment of this instructional spectrum by necessitating fewer adjustments to each lesson plan. Additionally, adding academic achievers to an already existing level can strengthen that level and encourage the teacher to make special provisions available to the most able students. It can also emphasize the need for specialization in teacher training, curriculum development, and materials (Hansen, 1964).

Finally, although money should not be the factor which determines whether or not a district chooses to accelerate its students, it is a consideration nonetheless. Fewer years in school mean less expense to parents and to school districts. In 1980, it was estimated that acceleration would save an individual up to $7,500.00 in costs and would add $10,000.00 in potential earnings (Jordon & Grossi, 1980). With these earnings come benefits to the community in the form of increased income and sales taxes paid over a longer period of time (Sternberg & Davidson, 1986).

Elitism

As previously stated, opponents argue that acceleration is undemocratic and promotes snobbery among an accelerated elite (Kulik & Kulik, 1984b). To many egalitarians, an educational system which offers a differentiated curriculum for a specially chosen

group of learners bears the stamp of elitism (Povey, 1980). Many administrators fail in their attempt to provide suitable educations for all learners because they give in to the fears and pressures that programs for the gifted are elite (Feldhusen, 1985).

This assumption, however, is strongly opposed by supporters of acceleration. The position that elitism will develop in programs for the highly gifted assumes that providing appropriate services for these students would foster the development of a social group which other students would perceive as intellectually superior. This is comparable to the area of athletics which takes the most able, offers to them specialized training, and then takes pride in the superior accomplishments. Although athletic programs appear to be little concerned about the development of elitism, it often arises in connection with academic programs (Feldhusen, 1985).

The proponents of acceleration contend that egotism and arrogance would actually be reduced. When students are with intellectual peers, they would be less likely to brag or to show-off (Paulus, 1984). Feldhusen (1985) states that caution should be taken not to label, categorize, or glorify the highly gifted students to such an extent that an elitist attitude develops. He summarizes his feelings about this concern by observing that thousands of schools have programs for gifted students which seem to suffer no obvious problems with elitism.

Social and Emotional Difficulties

Many school administrators and parents object to the concept of grade or level skipping. The picture of the little boy in short pants in a college classroom surrounded by tolerantly smiling upper-classmen has become abhorrent (Gallagher, 1959). Merle R. Sumption and Evelyn M. Luecking state in Education of the Gifted (1960) that acceleration may cause social and emotional maladjustment due to the fact that the gifted are closely associated with classmates who are older, larger, and more mature socially and emotionally. Thus, opponents are concerned with psychological and educational problems which may occur due to the child's inability to function on a physical and psychological level with children who are more chronologically advanced. It is the opponents' view that classroom peers will place the gifted child at the lower end of the established pecking order, and the resulting negative school experiences will culminate in academic underachievement and/or failure (Jordan & Grossi, 1980).

Some research does not appear to support the notion that skipping one or two years or levels adversely affects the social and/or emotional growth of a child. Studies conducted by Cutts and Mosely (1957), Keys (1938), Passow (1958), Shannon (1957), and Worcester (1956) and reviewed by Maynard C. Reynold (1960) in his report entitled Acceleration, universally agree that a moderate degree of acceleration for carefully selected students is advantageous by every standard. Acceleration, however, is held

responsible for unhappy teenage experiences among accelerants. It is important to recognize that it is not uncommon for people, gifted or not, to look back to their adolescent years as being a difficult time for social adjustment. The problem is that persons who have been accelerated may incorrectly blame these unhappy experiences on their acceleration. Persons who were not accelerated might blame their problems on other factors. Accelerated students, like all students, determine their own adjustment. The person who has little or no social life as an adolescent might probably have had little or no social life whether or not accelerated. Some people adjust easily; others simply do not (Davis & Rimm, 1985).

Other researchers report that multi-age grouping tends to be associated with better self-concept and attitude toward school. When David Pratt, of Queen's University, reported the results of his review of 27 studies in 1983, he found no consistent negative relationship between acceleration and poor social and/or emotional development. The results indicated, instead, that in groups of children of like ages, there is more yelling and bickering while struggling to be "top dog" (Pratt, 1983).

Paulus (1984) states that the typical gifted child is likely to be advanced to some degree physically, socially, and emotionally. A comparison of elementary accelerants and non-accelerants in New York City found both groups consistent in academic achievement, social and physical adjustment, and attitude toward and interest

in school even though there was an age and year difference in school. A follow-study at the high school level provided the same results.

In addition, Burks, Jensen, and Terman (1930) state that simply because students are in classrooms with children of their own chronological age, there is no guarantee that classmates will be at the same level of maturity and personal development. Within each classroom, emotional development varies greatly; educating a child at a level consistent only with age does not take into consideration other basic educational needs. Gifted children speak a language not understood by age-mates. When this happens, it leaves them feeling impatient and frustrated at the stupidities of their classmates. In many cases, able students have a greater chance for personal adjustment if exposed to more advanced subjects or placed with older students who are closer to their educational development (Lindvall, 1962).

Exceptionally Gifted Students

It was pointed out by Barbara Stoddard Burks, Dortha Williams Jensen, and Lewis M. Terman noted in Genetic Studies of Genius (1930) that it is the child with extraordinarily high IQ that experiences the most acute social problems. Their research states that the distribution curve of intelligence implies that a child with a 140-150 IQ will have a fairly large group of peers whose mental development is not tremendously far behind his own and who could be viewed as congenial playmates. It is the child with an

IQ of 160-170 "who stands in an extremely sparsely populated region of intelligence" (p. 173). They state that if a child's IQ is 180 at age six, the intellectual level is almost on a par with that of the average eleven-year-old; and at ten or eleven, it is not far from that of the average high-school graduate. Physical development, on the other hand, is not likely to be accelerated more than 10%, and social development probably not more than 20 or 30%. The inevitable result is that the child with an IQ of 180 has one of the most difficult problems of social adjustment that any human being is ever called upon to meet.

They further stress that such a child cannot hope to be accepted by ordinary children of the same mental level. However well the child may understand classmates, that child is too immature for them physically and will not be welcomed into their groups.

However, some proponents of acceleration state that the problems which these children may face can be due to their abilities, not to acceleration. Children with exceptional intelligence are most likely to be skipping grades. Their social problems, actually attributable to their extremely high intelligence, may mistakenly be attributed to acceleration (Davis & Rimm, 1985).

Proponents also support the principle that if one member of a dyad undergoes developmental changes, the other is likely to do so. Thus, the accelerated child is apt to mature as older classmates mature. Imitation is frequent in multi-aged groups.

Younger children tend to imitate older children, and this imitation continues into the adolescent years. The effects of older students on younger students are usually in the direction of increased sophistication and precocity of the younger students' behavior. Increased harmony and nurturance are often the results of placement with older students (Pratt, 1983).

College Years

There exists a concern about the later educational years of a student who is accelerated while in elementary or secondary school. What happens when that child reaches the college level? How will that student be able to function emotionally?

This researcher discovered two studies which dealt with these concerns. In 1979, Eisenberg and George studied and reported the progress of 49 students who entered college early and found that early entrants performed as well or better than did their age-in-grade classmates. Such acceleration did not appear to detract from social and emotional growth (Gallagher, 1985).

Additionally, a study reported by Weiss in 1978 concerned 123 college professors who had been accelerated through flexible progression while in elementary school. Weiss found that such acceleration posed no problems academically. There were some social anxieties and problems noted by 40% of the group, and the adolescent years were identified as those when social stress was the most difficult. However, such stress was rarely considered serious (Gallagher, 1985).

Studies at Johns Hopkins University, conducted by Julian Stanley, indicate that accelerated youths experienced little social or emotional difficulties in college classrooms, and their scholastic performances surpassed their equally talented, but underchallenged peers. As a result, Stanley recommended that students be allowed to take courses appropriate to their ability and achievement levels (Tursman, 1983).

Summary

This chapter has examined the literature concerning the ten negative effects of acceleration as discussed by opponents to use acceleration as a means of meeting the needs of the highly gifted student. The views of writers and researchers in the field of gifted education concerning the same ten effects were then explained. It is apparent that there are many views concerning acceleration.

Opponents of acceleration believe that accelerating students will cause them to miss certain basic skills while being the recipients of unbalanced educations. Additionally, the students will not have time to reflect upon their learnings or to develop leadership skills. Accelerating students has been equated to shoving them prematurely from the parental nest while, at the same time, causing greater financial and professional burdens for the school district. Opponents believe that elitist attitudes will be the result of acceleration. Stressed heavily by the

opponents to acceleration is the viewpoint that such an educational move will cause social and emotional difficulties for students both at school and in their personal lives. Acceleration will cause even more problems for the exceptionally gifted child who already has difficulties functioning socially, emotionally, and intellectually with average children. Finally, opponents state that if accelerated, highly gifted children will attend college earlier than normal thus creating additional social and emotional problems.

Proponents of acceleration, however, stress the opposite views. Because gifted students work and learn more quickly than others, supporters of acceleration do not believe that basic skills would be missed or that the education of these students would be unevenly balanced. Additionally, because gifted students absorb material more quickly than do their classmates, less time is needed for reflection. Test results have proven that accelerants have the opportunity to develop leadership skills while saving them years of time and lessening the financial burdens for their parents. Within the educational institutions, acceleration saves money for the individual districts while encouraging curriculum and material development to meet the needs of this group of students. Less dissension exists in multi-age educational situations, and better social and physical adjustment, as well as a better attitude toward school, are also potential results of acceleration. Proponents also stress that elitism will not occur when students are with

older students; they are less likely to brag or to show-off. The results of studies conducted by experts in the field of gifted education stress that the difficulties experienced by exceptionally gifted students are not due to acceleration. Those difficulties would have been experienced whether or not the students were accelerated. Furthermore, because of their acceleration, exceptionally gifted students will be likely to mature at a more rapid rate due to the time spent with older students. Finally, studies by Eisenberg, George, Weiss, and Stanley and reviewed by Reynold (1960) report that early entrants to college do as well or better than their age-in-group classmates and that such acceleration does not appear to detract from social and emotional growth.

CHAPTER 4

SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FURTHER RESEARCH

Summary of Findings

At various points in history, highly gifted students have been nurtured; at other points, they have been neglected. They have been honored, and they have been despised. They have been the focus of great concern, and they have been misunderstood. Likewise, the pendulum for meeting the academic needs of highly gifted learners has swung from interest to disinterest. It has swung into the mainstream of educational practice, and it has swung far away from the core of the educational system (National School Relations Association, 1979).

An integral element in many of these cycles of interest has been the use of acceleration as an effective teaching strategy in meeting the needs of the highly gifted student. As a part of this review of literature, the writer has examined this use of acceleration from an historical perspective.

Scholars of the early history of gifted education have been able to locate only a few attempts to provide special learning experiences for those children and youth identified as possessing special talents with no direct references to the term acceleration as an educational strategy. One of the first known attempts educate the highly gifted learner dates to classical times (300-400 B.C.) when the most able young men received special training and education

in order to become leaders of the next generation. Charlemagne (742-814) urged the education of these highly gifted at state expense. During the fifteenth and sixteenth centuries, the most able young men were trained and educated to assume governmental positions according to the findings of historians in the field. During the seventeenth century, governmental financial assistance was provided to assist gifted learners from lower economic classes.

In America, systematic education of the highly gifted was virtually nonexistent during the seventeenth and eighteenth centuries until Thomas Jefferson proposed a bill to educate the most promising students with public funds. Increased scientific interest and newly developed methods of testing intelligence and ability shifted attention toward the gifted learner during the nineteenth century. This interest in the education of highly gifted learners was marked by the 1869 publication of Sir Francis Galton's book Heredity Genius. Additional studies were conducted, and the theory was purported that all people are born with equal intellectual capacities and that differences in ability are directly associated with their training.

The scientific study of the gifted continued to develop during the early years of the twentieth century. At this time that Terman developed a mental test scale, based on Binet's study of measurements of aptitudes for learning, which made it possible to study comparatively differences in ability. It was also at this time that Terman began his longitudinal study of a group of 1,000

gifted students which would result in follow-up reports throughout the mid-1900s.

Acceleration, as an organized educational strategy to meet the academic needs of the highly gifted learner, was first introduced in Missouri in 1867 and was closely followed by similar programs in New Jersey, California, New York, and Michigan. As school systems began to adjust programs to include materials for highly gifted learners, research studies concerning characteristics and traits became more common. For example, studies by Terman, Hollingworth, and others attempted to offer summaries of the characteristics and needs of highly gifted learners.

These efforts at meeting the needs of the highly gifted learner were, however, scattered and relatively few in number. Following World War II and the emergence of the commitment to egalitarianism, interest in differentiating educational practices declined. It was not until the launching of Sputnik in 1957 that an increased interest in offering differentiated programming for the highly gifted again could be observed. New curricula were developed, and special classes allowed students to learn at their own rates.

The 1963 assassination of President Kennedy, along with the simultaneous societal concern with the Vietnam conflict and the Civil Rights movement, resulted in a decreased emphasis on acceleration in the elementary and secondary schools. It was not until the mid-1970s that the gifted education pendulum again swung back into favor. Federal and state governments began to offer

financial support and guidance to educational programs directed at this group of learners.

Abraham J. Tannenbaum noted this cyclical interest in gifted education. He stated, "No other group in education 'has been alternately embraced and repelled with such vigor by educators and laymen alike' as have the gifted" (Greenlaw & McIntosh, 1988, p. 16).

The relative use of acceleration, from its inception, seemed to follow the ebb and flow of the cyclical interest in gifted education. Regardless of its emphasis at any given period, the strategy has been vigorously opposed or vigorously defended. For example, there has been a wide-spread belief that an accelerated child will become a social misfit when advanced to classes composed of older students. On the other hand, much research points to acceleration as a highly successful course of action.

In the process of examining the positive and negative attitudes toward acceleration as demonstrated in various studies, the reviewer identified ten major oppositional effects as well as concomitant research indicating educational effectiveness of acceleration for meeting the needs of the highly gifted learner.

1. One concern raised by opponents of acceleration is the belief that the highly gifted learner who skips a grade or level may miss some of the basic educational skills. Proponents, however, state the basic skills will not be skipped; they will simply be learned more quickly.

2. Inadequate time to reflect on experiences and learning is the second concern of opponents to acceleration. Proponents counter this argument by stating that gifted learners absorb more from each experience and thus do not need as much reflection time.

3. The third concern emanates from the fear that gifted students who are accelerated may not be equally gifted in all academic areas. For example, while students may be capable of skipping a level in mathematics, they may not be ready to skip a level in social studies. This, it is argued, may lead to uneven educational development. However, proponents state that acceleration takes many forms. Perhaps these students may be able to skip a level in mathematics and remain with age-peers in social studies. A further consideration is the observation that the necessity to work harder in the more difficult areas reduces boredom and leads to a better attitude toward school.

4. Opponents of acceleration believe that accelerants, when placed in classes with older students, will not have the opportunity to develop leadership potential. Research reported by such reviewers as Tuttle and Becker (1980) indicate just the opposite. The students whom they observed proved to be superior to their non-accelerated classmates in leadership skills, as well as in grade point average and scholarship.

5. According to Gallagher (1975), parents feel uncomfortable with the idea of accelerating their children because this process lessens the time number of years they will spend together in a

family grouping. Proponents state that it is the child, not the parent, who must be considered. Acceleration shortens the time needed to complete an education and increases the number of years from which these learners can benefit financially from their chosen occupations and the number of years from which society can benefit by their skills.

6. The expenditure of teacher time is another issue raised by opponents to acceleration. New classes require more teachers, and that costs the school district more money for teacher salaries. However, proponents respond that acceleration increases the teachability within the classroom by eliminating one level from the instructional spectrum, thus making necessary fewer adjustments to lesson plans. Additionally, reducing the number of years in school mean less money spent for the education of the child by both the family and the school district.

7. The creation of an elitist group is a common argument used by those opposed to acceleration. To a society based on an egalitarian premise, offering special services to a small group of learners bears the stamp of elitism. However, supporters of acceleration contend that this is a common practice for athletic, music, and drama groups, as well as for mentally and physically handicapped students. Paulus (1984) also points out that because the gifted learners would share classes with older students, they might be less likely to show off or develop elitist attitudes.

8. A very common argument against acceleration concerns the emotional development of the child. There is a widespread belief that the accelerated child in a class with older students will be a social misfit and thus suffer emotional hardships. Much research does not seem to support this view. Numerous research studies cited support acceleration as an option for highly gifted students (Reynold, 1960; Lindvall, 1962; Pratt, 1983; Paulus, 1984; Davis & Rimm, 1985).

9. Some opponents charge that the exceptionally gifted child (IQ 160+) is the most affected negatively by acceleration. If advanced to a level equal to their mental capacities, these children will be affected most profoundly. Proponents state, however, that problems faced by these students are due to their extremely high intellectual abilities and not to acceleration. Because of their abilities, these children will have a difficult time in relationships with or without acceleration.

10. Finally, the college years are a concern when consideration is given to acceleration. Will a student who has skipped two or more years be able to adjust to college at a younger-than-normal age? Research studies examined in this review of literature indicates that young entrants to college do as well if not better than their classmates and do not appear to suffer social and emotional difficulties.

Conclusions

This review of literature has provided an opportunity for the researcher to draw conclusions concerning the effectiveness of acceleration as an educationally effective means of meeting the needs of the highly gifted learner. These conclusions are based upon a study of acceleration from an historical perspective and from the identification and examination of ten possible negative effects of acceleration.

First, the literature points to acceleration as an effective means of meeting the academic needs of highly gifted learners. However, it is interesting to note that while research and practice have demonstrated acceleration to be an educationally effective strategy for the education of highly gifted students, the practice is still criticized in many sectors. The cultural values that obstruct the use of acceleration continue to be reinforced rather than weakened, although research does not support the position. Sternberg and Davidson (1986) noted in Conceptions of Giftedness that they were unable to locate even one credible study that indicated that acceleration was not beneficial. Gold (1965) contended that it was apparent that the values which favor a standard educational period for young people are stronger than the demands for early achievement for the social good. Kulik and Kulik (1984a) affirm Gold's point of view when they state that their investigation revealed that cultural values are more likely to prevail when they clash with research findings.

Second, historical research seems to indicate that the use of acceleration to meet the needs of the highly gifted learner is cyclical. Whether it is practiced or is not is based upon the political and economic factors which characterize American society during specific periods. For example, following the launching of Sputnik, Americans feared losing their competitive edge, and gifted education became an educational priority. However, when the public agenda turned to providing an equal education for all students during the Civil Rights Movement, special programs for the gifted were eliminated.

Third, it appears from the research that two major issues are at the center of the controversy concerning acceleration: (a) the formation of an elitist group, and (b) possible social and emotional difficulties encountered by gifted youth. Throughout the literature, these two issues were the most frequently mentioned by those individuals/groups opposed to acceleration as an effective educational strategy for the gifted.

Implications for Future Research

The research conducted concerning acceleration as an educationally effective strategy for meeting the needs of the highly gifted student indicates that it is a viable means for educating our most able learners. Its effectiveness, however, is still questioned in some sectors. There remain many issues which require additional research in this area of gifted education.

1. More empirical studies are needed to examine whether acceleration is harmful emotionally, socially, or educationally to highly gifted students at specific grade levels.

2. On the basis of this literature review, it appears that little evidence exists which clarifies the extent to which acceleration is used as a teaching strategy across the United States. A descriptive study could be designed which would identify the extent to which acceleration is used in gifted programs. Related information concerning the program model, the methods of financing programs, and the identification procedures used also could be summarized.

3. Research using the ethnographic method could be conducted in which accelerated students are given indepth interviews to determine their views concerning their acceleration and its effect upon them educationally, socially, and emotionally.

4. Similarly, case studies of adults who were accelerated through their elementary and secondary school experiences could be conducted in order to determine the long-range effects of acceleration on adult social and emotional satisfaction, as well as on career adjustments and contributions.

5. Finally, a study of teachers of gifted children and their administrators could be designed and implemented which would determine their comparative attitudes toward acceleration as a means of meeting the educational needs of the highly gifted learner. This could lead to a determination of the possible effects of

their attitudes on the success or failure of the program. It also could determine whether there exists a dichotomy between the philosophy of teachers of gifted children and educational leaders concerning this differentiated program strategy.

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