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ABSTRACT

This literature review describes and evaluates five accelerative methods for teaching intellectually gifted students at the secondary level. The review stresses the importance of matching student characteristics and instructional type, citing research demonstrating that intellectually gifted students achieve at higher levels when their educational needs are assessed on an individual basis. The five programming options include: (1) curriculum compacting, (2) subject acceleration, (3) mentorships, (4) dual enrollment (in both high school and college), and (5) early admission to college. Discussion of each option contains a description, lists of advantages and disadvantages, and conclusions. A final discussion offers guidelines for matching student characteristics with each of the programming options. Appendices provide materials from the mentoring program of one school district. (Contains 40 references.) (DB)

Accelerated Education Methods for Intellectually Gifted Secondary Students

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Running Head: ACCELERATED EDUCATION METHODS

Abstract

Helping our intellectually gifted secondary students achieve at their highest level is one of the greatest challenges facing educators today. This study of published research on gifted education investigates five methods available for teaching intellectually gifted students. The purpose of this review of the research is to evaluate the following options to encourage a proper match between the intellectually gifted students and the type of program in which they are placed. The options include (a) curriculum compacting, (b) subject acceleration, (c) mentorships, (d) dual enrollment, and (e) early admission to college. The research that indicates intellectually gifted students achieve at higher levels when their educational needs are assessed on an individual basis will be cited.

Accelerated Education Methods for Intellectually Gifted Secondary Students

Helping our intellectually gifted secondary students in grades nine through twelve reach their potential is one of the greatest challenges facing education today. How can the academic needs of these gifted students be met through accelerating their curriculum?

The literature on gifted education discusses many options for meeting the academic needs of intellectually gifted secondary students, including the following, (a) curriculum compacting, (b) subject acceleration, (c) mentorships, (d) dual enrollment and (e) early admission to college. The purpose of this review of the research is to answer the following question: Do curriculum compacting, subject acceleration, mentorships, dual enrollment and early admission to college meet the academic needs of intellectually gifted students?

Curriculum Compacting

Recent research in gifted education (Feldhusen 1982; Renzulli, Smith, & Reis, 1982; Sisk, 1988; Starko, 1986; Starko, 1989; Van Tassel-Baska, 1989), indicates that much classroom time is spent teaching bright students many ideas and concepts they have already mastered. Curriculum compacting allows students to skip that part of the curriculum which they have already mastered (Starko, 1989). Unfortunately, many school districts offer few alternatives to the general curriculum to meet the special needs of their gifted secondary students. These students should have instruction geared to their intellectual level and to their areas of interest (Van Tassel-Baska, 1990). She notes that most schools use this form of acceleration for very few of their gifted students, yet of all acceleration methods used, curriculum compacting provides many varied and challenging experiences.

Curriculum compacting is probably the simplest form of acceleration to implement.

Teachers can readily assess student progress. Information about each student is available from many sources: classwork, school records, standardized test scores, former teachers, and observation (Starko, 1986). In order to prevent any gaps in their education, students should only be considered for compacting in areas in which they have mastered the material (Starko, 1989). The pretests and posttests, usually included with most textbooks, can be used to identify these strengths and weaknesses, if any. School districts need to plan carefully the outcomes they want their gifted learners to obtain from compacting and find ways to evaluate whether or not these outcomes are being met. This evaluation is important to ensure the continuity in the students' education, ensure the progressive development of higher-level thinking skills, and ensure the sophistication of the final products these intellectually gifted students produce (Van Tassel-Baska, 1989).

Intellectually gifted students have a capacity for processing more information at a faster pace and a higher level of instruction, and they should be given this opportunity (Feldhusen, 1982). Sisk (1988), citing (Renzulli and Reis, 1986), explains that curriculum compacting (1) allows intellectually gifted students to become involved in areas of study where they have more interest, (2) lessens the chance of the students becoming bored, (3) avoids the use of repetitious classwork, and (4) allows gifted students to advance at a pace more suited to their intellect. Feldhusen (1982) stresses the need for higher-level content and fast-paced instruction to maintain student motivation. On the other hand, Taylor (1989), writes, "Parents worry that their gifted children will be 'turned off' to school if they face boredom. The advice to our own children was, 'If you are all that smart, you will find ways to avoid boredom'" (p.46).

When considering compacting, Sisk (1988, p. 8), quoting Renzulli and Reis (1986), notes

that "The two [sic] essential requirements for successful compacting are (1) careful diagnosis and (2) a thorough knowledge of the content, and (3) objectives of a unit of instruction." Feldhusen (1982) would consider the students' capacities to learn faster and the students' commitments to task. Selection of compacting on the basis of these considerations should enable students to move on to material appropriate to their level of learning (Sisk, 1988).

In addition, when considering whether or not curriculum compacting is the best method of intervention for gifted students, the maturity level of the student should be taken in account. The teacher should be aware that, although gifted academically, students may be emotionally immature (Taylor, 1989). The classroom teacher should always explore the many available alternatives open to bright students. Renzulli et al. (1982), stress, "Curriculum compacting should be a basic component of any program designed to meet the

special learning needs of gifted students" (p. 193).

Advantages

Starko (1986, 1989) and Van Tassel-Baska (1989) present many advantages to the use of curriculum compacting for gifted students at the secondary level.

1. Gifted students are allowed to move more rapidly through the curriculum.

2. Students are encouraged to explore the subject matter in a more in-depth fashion.

3. Students are encouraged to become independent learners.

4. Students are allowed to explore issues, themes, and ideas the regular curriculum might not have allowed.

5. Students are given the opportunity to integrate learning opportunities across curricular areas.

Disadvantages

There are also disadvantages cited in recent literature to this form of acceleration.

1. Students need to have the maturity to be independent learners (Taylor, 1989).

2. Teachers face many demands making the daily management of curriculum compacting difficult (Starko, 1986).

3. Students need to be provided appropriate curriculum in order to assure a proper match between the subject matter and the student (Sisk, 1988).

4. Students need to have the support of their administrators, teachers, and parents in their scholarly endeavors (Howley, 1987; Starko, 1986).

Conclusions

The research shows intellectually gifted secondary students can benefit from a compacted curriculum. These gifted students learn at their own pace, usually much faster than their chronological peers (Feldhusen, 1982). Curriculum compacting can provide added acceleration. Using curriculum compacting allows the students more time to devote to areas of study where they have a

particular interest. Renzulli et al. (1982), reiterate their views, "Any child . . . who can cover regular curriculum material in a more compact and streamlined fashion should be given the opportunity to do so, provided, of course, that acceleration does not cause undue stress or emotional problems for the child" (p. 186).

Gifted proponents need to educate their fellow teachers of the advantages of implementing curriculum compacting in their classrooms. Pretests can assess mastery of students' academic skills. Curriculum compacting can avoid the boredom of repetitious classwork (Starko, 1989). Starko further states "all students should have instruction that is appropriate to their needs" (p. 76). Curriculum compacting, when implemented carefully, keeping the needs of each student in mind, can meet many of the academic needs of our gifted secondary students .

Subject Acceleration

Advanced Placement Courses

Many options are available for gifted secondary students when considering subject acceleration. One of the most popular ways to meet the academic needs of intellectually gifted secondary students is through the use of Advanced Placement courses. Advanced Placement courses are college-level classes in which the curricula are developed nationally by the College Board for high school students. Student performance is evaluated by an examination, which, if successfully passed provides students an opportunity to receive college credit (Herr, 1992). Many times the universities and colleges involved provide assistance to secondary schools in developing Advanced Placement classes. In Gary, Indiana, instructors from Indiana University Northwest and Purdue serve as the instructors in the Gary high schools (Feldhusen, 1983).

In Michigan a consortium was established in 1980 among five school districts. One of the

objectives of the Center for Advanced Studies and the Arts (CASA) is to offer Advanced Placement classes not available to students in the home school districts. In order for the Advanced Placement classes to be offered, the classes cannot be available at three of the five home school districts. Currently CASA offers 11 Advanced Placement classes. J. Gutman (personal communication, May 26, 1993).

The courses usually take a full academic year to complete. The courses are designed to be intellectually demanding and require more of students than traditional courses. The Advanced Placement courses allow gifted students more opportunity for individual progress (Karnes & Chauvin, 1982a). Karnes and Chauvin go on to note that the emphasis is on scholarship, not mere memorization of facts and figures; higher-level thinking skills and research skills are integral parts of these Advanced Placement courses. The Advanced Placement program supplies curricular outlines and teaching guides, although the

teachers are given flexibility to teach the classes as they want (College Board, 1990).

The tests contain essay and objective questions. The examinations are specifically designed to measure the range and depth of the students' knowledge in the subject area. Thus, the answers to the free response questions are graded on the extent of understanding of the subject matter and completeness of thought while less emphasis is placed on the quality of the students' writing. The examinations are graded by college and secondary school teachers. The free response and objective results are combined into a single grade. The results are converted to the Program's five-point scale:

5 -- extremely well qualified

4 -- well-qualified

3 -- qualified

2 -- possibly qualified

1 -- no recommendation

In 1990, 490,299 examinations were given by 9,292 schools across the United States. The majority of

students taking the Advanced Placement examinations in 1990, 66%, received grades that most colleges recognize as worthy of college credit--3 or higher (College Board, 1990).

Advantages

The College Board (1990) reports many advantages to gifted students who take Advanced Placement courses:

1. Gifted students save time and money by a quicker entry into advanced courses when in college.

2. Gifted students can use the time they save for advanced study, internships, or work experiences.

3. Gifted students who complete more Advanced Placement courses are more likely to succeed in college. Of all preadmission variables studied, the number of Advanced Placement courses earned was found to predict high achievement in college (Brody et al. 1990).

4. Gifted students are often encouraged to take Advanced Placement courses through the use of

a weighted grading scale in order to receive a higher GPA (Herr, 1992).

Disadvantages

Some researchers also note disadvantages for Advanced Placement courses:

1. Gifted students have not been found to benefit consistently from homogeneous grouping (Oakes, 1986).

2. Gifted students may receive credit for an Advanced Placement course at one institution, but not at another. Although scoring is uniform, college policies for accepting credits are not consistent (Cox, Daniel, & Boston, 1985).

3. Gifted students may take Advanced Placement classes for the wrong reasons. For example, students may attempt to gain extra honor points for their grade point average (Herr, 1992).

Honors Courses

Honors courses are another form of subject acceleration widely used for gifted students. Honors courses are advanced courses in which the

curricula are established locally by each school district, and student performance is evaluated internally (Herr, 1992). Cox et al. (1985) note that criteria established for placement in the honors classes included achievement test scores in the subject area, grade point average in the subject area, teacher and counselor ratings, and parental support.

Advantages

Honors classes provide gifted students the following advantages:

1. Gifted students need to experience higher level curricula, faster-paced instruction and the challenge of their intellectual peers (Feldhusen & Kennedy, 1989).

2. Gifted students who display content mastery in one subject are benefitted by the honors course in the area of their proficiency (Rogers & Kimpston, 1992).

3. Gifted students learn how to budget their time more carefully by taking these more challenging courses (Cox et al., 1985).

4. Gifted students' parents are more actively involved in their children's education, and have more contact with their children's teachers (Prescott, 1986).

Disadvantages

There are some disadvantages noted in the literature for gifted students taking honors classes:

1. Gifted students may find it more difficult to get the A's they have always taken for granted (Cox et al., 1985).

2. Gifted students can be subjected to excessive pressure by their parents. Elkind (1987) reports ". . . it is not hard to connect the reported increase in stress symptoms over the last decade with the pressure on today's children to be superkids" (p. 61).

3. Honors courses are a form of tracking (Oakes, 1985).

Conclusions

A review of the literature clearly shows many advantages to gifted secondary students taking

Advanced Placement and honors courses. Cox et al. (1985) note that the atmosphere in these accelerated courses is stimulating.

Teachers, counselors, and parents should be involved in planning the curriculum of gifted students. When educators consider whether subject acceleration is an option that should be considered, the needs and goals of gifted students should be evaluated on an individual basis.

Sternberg & Davidson (1988), quote Renzulli on the subject of acceleration as follows:

> It is nothing short of common sense to adjust the curriculum in those areas where high levels of proficiency are shown. Indeed advanced coverage of traditional material and accelerated courses should be "regular curriculum" for youngsters with high ability in one or more subject areas. (pp. 85-86)

Mentorships

Mentorships provide another method of instruction for gifted secondary students. A mentor is more than a teacher; he or she is a blend of teacher and friend (Ellingson, Haeger, & Feldhusen, 1986). The mentor is several years older than the student, usually an 8- to 15-year age difference exists between the gifted student and mentor. The mentor relationship usually lasts an average 2- or 3-year time span (Ellingson et al., 1986; Levinson, 1978).

Gifted students are good candidates for mentor programs because of their ability to work independently, their high degree of self-motivation, and their ability to work on a one-to-one basis with an adult (Ellingson et al., 1986). Mentor relationships are an effective way to give gifted students a chance to learn about areas not offered in the regular secondary curriculum. Typically students observe and assist their mentor away from the school setting. This activity usually occurs in the mentor's place of

work--a law office, bank, physician's office, etc., depending on the gifted students' interests. Working with professionals in the community, gifted students learn first hand the activities, responsibilities, problems, and life-style associated with their chosen areas of interest. The relationship between the mentor and gifted student is varied. The relationship is not confined merely to the particular project, task, or situation. Rather it may spill over into other areas of the lives of both persons. In many cases, a relationship will extend beyond the limits set by the formal agreement (Beck, 1989; Cox et al., 1985; Davis & Rimm, 1989). McGreevy (1990) found that "true mentorships have a chance to develop when they are based on a shared passion for something" (p. 5). As noted above, the relationship between the mentor and gifted student is a very special one. The mentor acts as a role model, information provider, and in many cases a door opener for his or her gifted students.

Obviously care should be taken when matching the mentor and the gifted student (Merriam, 1983).

In planning a mentorship program Cox & Daniel (1983) suggest the following guidelines:

1. Elicit the support of the district superintendent, the school board, and community leaders.

2. Specify the purpose of each mentorship and the role of the student.

3. Develop a clear, defensible academic credit policy. If high school credit is given, the work experience should relate directly to the course for which the credit is received.

4. Prepare written criteria for student selection based upon multiple indices, not just one.

5. Try to achieve the best mentor/student match possible. Mentors should be creative producers who will not treat the students as "go-fers."

6. Plan orientation seminars to acquaint students with the professional and business environments in which they will work.

7. Prepare students for the mentorship with related course work prior to the experience.

8. Help students to develop individual goals.

9. Design the program to meet the academic needs of students. Students should be assigned required reading; they also should keep journals in which they analyze their activities and experiences.

Locally, the Troy School District has implemented a viable mentorship program. A partial list of mentors used by the Troy School District is included as Appendix A. The mentor program application, student mentor recommendation form, evaluation of the mentor program, and mentee progress sheets used by the Troy School District are included as Appendices B, C, D, and E. Through the use of documents such as those shown in the Appendices, the identification process,

evaluation process, and the needed follow-up can be an effective means, both for matching mentor and the gifted student, as well as a means of program evaluation. A mentorship program requires not only effective organizers and coordinators, but also communicators who are able to inspire gifted students and their mentors to work well together (Ellingson et al., 1986).

Advantages

Beck (1989), notes numerous advantages to gifted students who work with a mentor:

1. Mentor programs provide gifted students a chance to learn about areas of interest not included in the typical secondary curriculum.

2. Mentor programs provide gifted students an opportunity to work with professionals in the community.

3. Mentor programs provide gifted students an opportunity to learn about educational and career options first hand.

4. Mentor programs provide gifted students an opportunity to look at the lifestyles and

characteristics of the professional, and make contacts which help them obtain jobs.

5. Mentor programs provide gifted students a realistic idea of what a career involves.

6. Mentor programs provide gifted students a more individualized relationship, and thus the gifted students are able to absorb more information (Ellingson et al., 1986).

Disadvantages

There are also some disadvantages to mentoring noted in the literature:

1. Mentor programs many times are not clearly defined and implemented (Merriam, 1983).

2. Mentor programs are sometimes too unstructured, more detailed planning and goals are needed (Ellingson et al., 1986).

3. Mentor programs should make an effort to provide more female mentors for students who request them (Beck, 1989).

4. Mentor programs should provide a career guidance component systematically in the program (Beck, 1989).

Conclusions

The review of literature indicates that mentorship programs provide gifted students with many academic benefits. The types of experiences gifted students receive in this type of program are those that cannot be duplicated in the classroom. Students are able to see first hand what actually happens in the career area in which they may choose to work.

This type of program requires much structure and administrative work. Frequent feedback between the program coordinator, the mentors, and the gifted students must be maintained (Ellingson et al., 1986).

When considering which students should be included in mentorships, teachers, counselors, and parents should be involved. Students should be carefully selected using their interests as a guide, and the mentor selection should be made with a great deal of foresight, since the match is so important. When mentorships are implemented using the advised guidelines, mentorship programs

can meet many of the academic needs of our gifted secondary students.

Dual Enrollment

Challenging intellectually gifted secondary students to maintain a high level of instructional intensity, especially in their junior and senior years, is a problem faced by many secondary schools (Andrews & Marshall, 1991). One means of accelerating education of these gifted students is through dual enrollment. Dual enrollment allows gifted secondary students the opportunity to take college courses while still in high school (Davis & Rimm, 1989).

The most common way of implementing this program is for gifted students to attend their secondary school for part of the day and then attend a local post-secondary school on a part-time basis. The courses can usually be applied toward degree requirements when the students marticulate on a full-time basis (Karnes & Chauvin, 1982a). Sometimes the students are able to receive high school and college credit for the same course (Cox et al., 1985).

Another means of implementing the dual enrollment program is through a cooperative plan in which a post-secondary teacher may teach in one or more college-level courses in area secondary schools (Cox et al., 1985).

Currently Implemented Programs

Some states, including Minnesota, have enacted legislation which allow high school juniors and seniors to take college courses at no cost to themselves (Andrews & Marshall, 1991). In Ottawa, Illinois, at Marquette High School, the administration offered honors students the opportunity to enroll in classes at Illinois Valley Community College. The administration agreed to guarantee that courses would be transferred to four-year universities throughout Illinois and other mid-western states. The college agreed to serve Marquette High School during its regular school hours using full-time faculty from the college to teach the classes (Andrews & Marshall, 1991). The instructors were told to teach the same course content and use the

same testing and grading system as used on campus. The grade distribution was similar to those received by the on-campus students (Andrews & Marshall, 1991).

Purdue University also implements a dual enrollment program. Their program differs in its delivery system. The Purdue College Credit Program operates over the summer. Students live on campus for a two-week period. The program allows high school students to take a regular Purdue freshman or sophomore, 2-3 credit course over the two-week period (Feldhusen, 1983).

Fort Hays State University in Hays, Kansas, also offers a dual enrollment program. The program--College Studies for the Gifted (CSG) is a cooperative effort among the university, local school districts, parents, and students. It provides intellectually gifted students opportunities to take college classes normally not available to them (Luhman & Harkness, 1988). The goals of the CSG are (1) to meet the academic needs of intellectually gifted student, (2) to

meet the social and emotional needs of gifted students and (3) to create policies, procedures, and regulations to permit gifted students to take college courses (Luhman & Harkness, 1988).

Guidelines

Admission guidelines have been established for the intellectually gifted students enrolled in the CSG program: (1) students have been identified as gifted by their school, (2) students have been accepted have high achievement scores or very good grade point averages (not necessarily those who have IQ's of 130 or higher), and (3) students have IQ's of 130 or above, but have low achievement scores or grade point averages.

Advantages

Karnes & Chauvin (1982a) note many advantages to dual enrollment for intellectually gifted secondary students.

1. Colleges offer a wider range of courses than secondary schools, especially those located in rural areas.

2. There are usually more opportunities to pursue topics in greater detail.

Andrews and Marshall (1991) offer other advantages.

3. Many gifted students are able to receive between 12 and 24 semester hours of college credit before graduating from high school.

4. Students at Marquette High School in Ottawa, Illinois, received credit for both high school graduation requirements and for college credit.

5. Students in Minnesota take the courses at no cost to themselves due to the passage of the Postsecondary Enrollment Options Program.

Disadvantages

Cox et al. (1985) note the following disadvantages to dual enrollment.

1. Many college courses are not sufficiently demanding for exceptionally gifted high school students.

2. Many school systems do not pay the tuition expenses and the gifted students are not able to pay for tuition and books.

3. When the students travel to the college campus, transportation arrangements can pose a problem.

4. Some colleges are reluctant to enroll high school students.

Conclusions

From the research reviewed it is evident there is a need for dual enrollment programs for intellectually gifted secondary students. Many more programs were found in the research than mentioned in this study. The most well-developed and innovative programs were included in the review. These programs grew from the needs of gifted students for a more accelerated education than they received at their secondary schools.

The programs varied in their approach, some were offered in the secondary school, some at the college, other classes were offered on Saturdays, and some during the summer (Andrews & Marshall,

1991; Feldhusen, 1983; Karnes & Chauvin, 1982a). Even though these programs differed in the manner of implementation gifted students benefitted from the programs, not only academically, but they were also able to participate in their high school activities and have social interaction with their fellow high school peers. Students included in dual enrollment programs should be chosen carefully, following established guidelines, and with the input from the gifted students' counselors, teachers, and parents. When implementation is made keeping the needs of the gifted students in mind, dual enrollment can meet many of the academic needs of gifted secondary students.

Early Admission to College

A natural extension of Advanced Placement courses and dual enrollment for intellectually gifted secondary students is early entrance to college (Cox et al., 1985). Early admission to college is not a new idea. There have been numerous examples of young graduates dating back to 1887 (Brody, Lupkowski, & Stanley, 1988). A review of the literature in this area reveals two major means of implementing early entrance to college--transition programs specifically designed for students who have not completed high school prior to admission, and regular admission procedures (Brody et al., 1988; Feldhusen, 1983).

Transition Programs

The trend toward early admission to college by intellectually gifted secondary students has brought about the need for special programs to ease the transition from high school to college. One excellent example of such a program is the Clarkson School in Potsdam, New York. Students in the Bridging Year Program have completed their

junior year in a traditional high school. The students take a typical freshman college curriculum. The students participate in an intensive five-day orientation program before beginning classes. The gifted students attend classes with the college students, but live in separate living quarters. The rules governing the gifted students in the bridging program are strict. After completing the bridging year, Clarkson School students return to graduate in their home high schools. They may then continue at Clarkson University or at another institution (Kelly, 1984; Kelly 1985).

Another example of a transition program is the Texas Academy of Math and Science. This program is a two-year residential, early admissions program offered through the University of North Texas in Denton, Texas. The Texas Academy is a university program. Upon completion students receive a high school diploma from the academy and two years of college credit. Unlike the Clarkson School, the tuition is paid by the

Academy, the students are responsible for room and board (Ramsay & Redding, 1988).

Other examples of universities with special transition programs for gifted high school students are at the University of Washington, Simon's Rock College, and Mary Baldwin College. The philosophies of these programs are predicated on the belief that learning and motivation are enhanced when the challenge is neither too easy to promote real growth nor too hard to be mastered (Brody et al., 1988; Robinson & Janos, 1986). The gifted students are carefully selected using test scores, evidence of previous academic achievement, letters of references from teachers, and interviews, usually with their families to obtain a complete picture of the gifted students. Students are selected in sufficient numbers so they will have a peer group to identify with during their early university experiences. The students meet regularly during the first year of university enrollment, and have the support of

special counseling and advising (Robinson & Janos, 1986).

High schools have begun to recognize the value of early college-level admission for their students, and colleges have begun to realize the benefits of creating these programs (Kelly, 1985). The Carnegie Foundation for the Advancement of Teaching has cited a number of similar projects currently being initiated across the United States (Kelly, 1985).

Regular Admission Procedures

Brody et al. (1988) in their survey of colleges and universities found 87% admitted qualified high school students to their universities. Karnes & Chauvin (1982b) in their study of early admission to college, also found that a high percentage, 66%, of colleges and universities, were willing to admit high school students. Most of the universities had no set policies specifically governing early entrance procedures. Karnes & Chauvin noted of the colleges and universities surveyed, 75% said they

had no minimum age requirement. The institutions with age requirements ranged from 14-17 years. Test score requirements also had a wide variation, ACT scores acceptable in the 18-29 range, and SAT scores from 700 to 1400. The majority of the colleges and universities surveyed required a recommendation from the high school, and 45% required an interview.

Brody et al. (1988) stated in their study that the majority of gifted high school students who entered college early were extremely successful both academically and socially during their first year of college. They concluded that student achievement and social success were enhanced by (1) taking Advanced Placement or college courses while in high school, (2) developing a high-level of verbal reasoning and writing ability, and (3) being highly motivated to enter college early. Brody, Assouline & Stanley (1990) further advise that early entrants possess at least average SAT scores for the college they wish to attend. If their scores are not average

or above, they suggest that the gifted students choose a less selective university or reconsider early entrance.

Brody et al. (1990) found that early accelerants when compared to non-early accelerants tended to graduate in a shorter period of time and earned more honors. The gifted, younger students had an advantage over other students because their SAT scores were higher and they had better high school preparation, notably more Advanced Placement courses. Brody et al. further note that of all preadmission variables studied, the number of Advanced Placement credits earned was found to predict high achievement in college. They advise all gifted students who plan to enter college early to take a variety of advanced courses while in high school.

Brody et al. (1990) propose the following recommendations for gifted students who plan early entrance to college: (1) students who have mastered high school coursework should be considered academically qualified for college even

if they are young chronologically, (2) students who plan early entrance to college should take an accelerated high school curriculum, (3) mathematically gifted students should be aware that verbal abilities and writing skills should also be well developed, and (4) students should be highly motivated to enter college early.

Advantages

Karnes & Chauvin (1982b) offer the following advantages for early admission to college:

1. Since many early entrants will go on to graduate school, early admission is an avenue that gifted students may pursue to shorten the total length of time spent in school, using both time and money to better advantage.

2. Early admission allows the gifted student to use the time saved as a practitioner, rather than as a student.

3. Early admission allows gifted students to interact with students who are their intellectual peers, diminishing the possibility of problems

associated with inappropriate curriculum or boredom.

4. Early admission allows gifted students to progress academically at their own pace (Cox et al., 1985).

5. The early admission students surveyed stated satisfaction with their choice to enter college early (Janos, Robinson & Lunneborg, 1989).

Disadvantages

1. Early admission students do not receive special counseling services needed for gifted students when they register under regular admission procedures (Karnes & Chauvin, 1982b; Feldhusen, 1983).

2. Early admission students may later feel cheated out of the social and extracurricular activities they would have had in high school (Davis & Rimm, 1985).

3. Early admission students who do not receive their high school diploma before entering college, and then for financial, health, or personal reasons, do not complete college will not

have educational certification (Rogers & Kimpston, 1992).

Conclusions

Early admission to college can meet the needs of some gifted high school students when the acceleration is carefully implemented. From the review of literature on early admission to college, it is apparent that a need exists for this type of acceleration for some intellectually gifted secondary students. The current trend by some colleges to offer transition programs to ease the passage from high school to college is encouraging. This type of acceleration needs much forethought on the parts of the gifted students, their parents, high school and college counselors. Definite admission criteria needs to be established by the colleges and universities accepting these gifted students. Special counseling at the colleges should be available to these students. The literature in this area indicates that these special counseling services are mainly available to students in transition

programs. The colleges need to address this issue if they are going to admit these younger, gifted students.

It is clear from the review of literature on early admission that academically the students are progressing without many problems. In fact, they are often ahead of the regularly admitted students academically. The research shows students perform well when they are carefully selected based on specific criteria, and receive adequate counseling services.

Discussion

The review of literature indicates that academic acceleration can meet some of the needs of intellectually gifted secondary students. Because the gifted students' vary greatly, the need for a proper match between the students and method of acceleration should be carefully examined before implementation. Administrators and teachers should be aware of which methods of acceleration to use in order to ensure a proper match between the students and the type of intervention. They must use all the information they have in order to accomplish the correct educational placement. The students' existing achievement levels and abilities to move more rapidly than the norm should be established in order to make the best educational placement. Kirschenbaum (1984) states, "the superior level of cognitive ability is the quality of giftedness to be matched with an appropriate program of accelerated education" (p. 95). Following is a discussion of which students will benefit most

from each of the five methods of acceleration studied.

Curriculum Compacting

When curriculum compacting is considered for gifted students, the students' current levels of mastery should be assessed. This can be done by the use of pre-tests, standardized test scores, teacher evaluation, and observation. Since the students often work independently with curriculum compacting, the maturity level of the students needs to be assessed.

Curriculum compacting is beneficial with gifted students who may not have sufficient knowledge to test completely out of the material, but are able to master the subject matter at a more rapid pace. For these students, compacting can be accomplished by allowing them to progress through the subject matter at their own pace.

In addition, curriculum compacting is beneficial for students whose needs for acceleration are in one or two subject areas. The

student can then proceed with the standard curriculum in other subjects.

Subject Acceleration

Advanced Placement Courses. Advanced Placement courses should be considered for gifted students whose curricular needs cannot be met through the standard high school subjects. This form of acceleration is advantageous to students who need college-level instruction, but who want to remain in the high school setting.

Honors Courses. Honors courses, like Advanced Placement courses, should be considered for students whose needs cannot be met by the standard high school curriculum. These courses are designed by the local district, so they can be modified to meet specific needs. Due to this flexibility, students may prefer this type of course rather than the Advanced Placement course and its more rigid standards.

As stated in the review of the literature, to be successful, students who take either Advanced Placement or honors courses should meet the

criteria established by the district. Students who would benefit most from subject acceleration are those who display content mastery and a need for advanced coursework in certain subjects.

Mentorships

Mentorships provide opportunities for gifted students that cannot be met through any other form of acceleration studied. The State of Illinois offers a governmental mentorship program. Students are selected on the basis of their maturity, leadership, initiative, and special talents. This mentorship program enables students to gain first-hand the opportunity to work in governmental agencies (Cox and Daniel, 1983). Due to the specialized nature of this acceleration, the match between students and mentors is very important. The guidelines stated in the review of the literature should be followed closely to provide the best match possible.

There are many gifted students for whom mentorships may be beneficial. Students from lower socioeconomic status may not have any idea

of career options available to them. Mentors can open a new world for these students by showing them career possibilities firsthand. These students may be given an opportunity to look at lifestyles previously unknown to them. The contacts made through their mentors can be invaluable to them in the future--in terms of references and job opportunities.

Another population for whom mentorships are beneficial is gifted female students. It is important that female students have an opportunity to choose a female mentor if they desire. Many times gifted females students are unaware of career possibilities open to them (Shamanoff, 1985). Mentorships allow these students to see the wide array of professional positions currently held by women. Through the use of mentorship programs, these students have an opportunity to ask questions that only a female could answer, such as, "How do you combine a family and successful career?" The answer to this question was always the same, "It is not easy, however, the

key is an understanding and helpful spouse" (Shamanoff, 1985, p. 163). As stated in the review, there is a large discrepancy between the number of male and female mentors. Educators need to be aware of this and actively seek more female mentors for their gifted female students who request or need them.

Mentorships can also be used to great advantage with gifted students who wish to develop their creative thinking skills. Students with this desire can be matched to work with a creative professional. These mentors can be found in careers such as art, photography, acting, journalism, or other careers that require creative thinking and problem solving skills (Davis & Rimm, 1989).

The students' needs and desires are important when considering a mentor relationship. Using the criteria set forth in the review and keeping the educational and career goals of the students in mind, an appropriate match between student and mentor is more likely to occur. Mentorships

provide a unique opportunity for gifted students when the programs are carefully implemented and assessed.

Dual Enrollment

Opportunities for dual enrollment should be available for a select group of gifted secondary students. These are the students who need advanced college-level coursework beyond the Advanced Placement or honors coursework level. For these students, dual enrollment provides them the opportunity to meet their intellectual needs, but at the same time allows them to remain in high school part of the day and enjoy the benefits of interaction with their peers.

Another group of students that will benefit from dual enrollment are those living in rural areas. Many times the smaller, rural high schools do not offer the advanced coursework needed by gifted students. Dual enrollment can allow these students to receive the education they deserve. Summer residential programs, such as the program at Purdue University, would be very beneficial for

gifted students who do not live within commuting distance from a junior college or university.

There is a need for dual enrollment for many gifted secondary students. It is up to administrators, teachers, and counselors to be creative when meeting the special needs of gifted students. Dual enrollment should be an option for gifted secondary students who meet the guidelines established by the local school districts.

Early Admission to College

Early admission to college should be available to the few gifted secondary students whose educational needs cannot be met in the high school setting. These are the students who have taken all the Advanced Placement and honors courses available to them. In addition, many of these gifted students have already taken college courses offered through dual enrollment programs. The research in this area consistently shows that early accelerants do well in college, in fact they tended to graduate in a shorter period of time and earn more honors, than nonaccelerants.

This form of acceleration requires a great deal of forethought and planning. As stated in the review of the literature, students should be carefully selected based upon strictly adhered to guidelines. If the gifted students are extremely young, under 16 years old, a university with a transition program should be considered where more structure and special counseling services are provided to help students adjust to college life at such a young age.

At this point in a gifted students' education, their motivation to attend college early should be a prime factor. Early admission to college is a radical step for gifted students to make, their feelings should be considered. The gifted students should make this very important decision, not the parents or counselors. As Sternberg, quoting Stanley & Benbow states, "if the youth is reluctant to take a particular accelerative path, . . . he should not be urged to do so" (p. 374).

The research shows that some of the academic needs of intellectually gifted secondary students can be met by the accelerative methods studied. Teachers, administrators, and parents must work cooperatively to ensure that gifted secondary students receive the best education available.

Many aspects of gifted education need further research. To date, there have been no studies which attempt to document the prevalence or seriousness of any negative effects of mentoring, or the absence of mentoring. Only successful mentorships have been studied.

Passow (1989) states that more research is needed on the dual goals of equity and excellence. Educators need to know how to identify, nurture, and utilize the talent of disadvantaged populations--the gifted children of the poor and minorities. These students' intellectual capabilities are often untapped. This underachievement represents a great talent loss for the students as well as society.

Passow further notes that gifted education is still perceived as elitist by many people. Research is needed to determine the benefit gifted students gain from differentiated education and at what costs, if any, to other students.

The answers to these questions will help educators plan effective programs to further the effectiveness of our intellectually gifted students. It is the responsibility of advocates of gifted education to ensure that this unique and valuable group of students is not ignored in our educational system.

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APPENDIX A

PARTIAL MENTOR LIST

ACCOUNTING
ADVERTISING SPECIALTIES
ARCHITECTURE
BIOMEDICAL RESEARCH
BUSINESS ADMINISTRATION
CHILDCARE
CHIROPRACTIC
COMMUNITY SERVICE ADMINISTRATION
COMPUTER GRAPHICS
CONFERENCE PRODUCTION
EDUCATION
ELECTRONICS
ENGINEERING
EXERCISE PHYSIOLOGY
FINANCE/BANKING
HEALTH CARE
HOTEL MANAGEMENT
HUMAN RESOURCE/PERSONNEL
LAW
MARKETING
MEDICAL ADMINISTRATION
MEDICINE
MODELS: AERONAUTICS/AUTOMOTIVE
NURSING
POLICE WORK
PUBLISHING/COMMUNICATIONS
PURCHASING
TRAVEL
T. V. VIDEO PRODUCTION
VETERINARY MEDICINE

APPENDIX B

MENTOR PROGRAM APPLICATION

STUDENT NAME _____GRADE _____

SCHOOL_____

HOME ADDRESS_____

PHONE NUMBER_____

FAVORITE SUBJECT (S):_____

EXTRA-CURRICULAR ACTIVITIES AND HOBBIES:_____

_____

CAREER PLAN:_____

OVERALL GPA:_____ MENTEE INTEREST AREA:_____

Briefly explain why you would like to work with a mentor:

Cooperating Teacher _____Dept. Head_____

PARENT SIGNATURE_____Date_____

Return this application, 2 recommendation forms, and a high school transcript to the PACE chairperson. At Athens, it is Mrs. Corrine Alonso; at Troy High, it is Mrs. Carol Rodwell.

APPENDIX C

STUDENT MENTOR RECOMMENDATION FORM

I am recommending_____ for the Mentor Program based on the following assessment of the student's skills.

	1	2	3	4	5 (high)
Thinking/reasoning skills		------			
Creative skills		------			
Social skills		------			
Organizational skills		------			
Communication skills		------			

Additional comments:

Teacher signature: _____ Date:_____

Department: _____

APPENDIX D

EVALUATION OF THE MENTOR PROGRAM
(for mentors and mentees)

Name:_____ Mentor _____ Mentee _____

Speacific interest area of mentor/mentee _____

Was this a satisfactory experience for you? Yes _____ No _____

1. Please elaborate briefly on your answer to the previous question.

2. Would you be interested in participating in a mentor relationship again?
Yes _____ No _____ Please explain.

3. As this is still a very new program, we are interested in any comments and/or suggestions you may have which will help us improve the program.

Comments:

Other suggestions:

You may return this evaluation at the Reception on May 6, or send it to:
Corrine Alonso, 1100 Urbancrest, Trov, MI 48083

APPENDIX E

MENTEE PROGRESS SHEET

Mentee _____ **School** _____

Grade _____

1. Are you keeping a log of the hours you meet with your mentor and spend on other mentorship activities:

   Yes ☐ No ☐

2. On the average, how many times (or hours) do you meet with your mentor per week?

3. Please give a brief description of your project.

4. Do you foresee any problems in completing the project by May 1st? If there are problems, please briefly explain.

5. Please describe any new skills you've acquired as a result of this program.

6. Are you encountering any difficulties or problems in this program?

Return this progress report to Mrs. Rodwell at Troy High School or Mrs. Alonso at Athens High School by March 18. Failure to do so may result in a loss of credit.