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## *College Planning for Gifted Students*

One of the most important decisions the consultant will assist the gifted student in making is the choice of a college. Bright students and their parents often have strong, and sometimes conflicting, opinions about college choices. There are over 3,000 colleges and universities in the United States, all vying for the enrollment of bright students. Matching students and colleges is a difficult task particularly when it is nearly impossible for any counselor to know the characteristics of more institutions than those within their own state and a few outside their own state. Consultants often have the opportunity to travel widely and acquaint themselves with many campuses; but seldom can know how an institution's particular faculty can meet the needs of gifted students.

Most of the information available to counselors and students is in the form of college brochures and pamphlets. These materials, sent by the colleges and universities themselves, tend to be characterized by advertising rather than objective reporting of information about the institution. Many college rating guides exist; however, few of these guides are objective and comprehensive. The formulae used to create the ratings can often be easily be manipulated by institutions. [n addition to the problem of the scarcity of information about colleges is the fact that gifted students are often unsure of their own characteristics and the ways in which their needs might be met by various kinds of higher education institutions. Finally, students, parents, and counselors are all often hampered by misconceptions of generalizations about what kind of college is best for gifted students.

### Theory

Kerr (1991) provided a theory of college planning for gifted students that was based on the needs of gifted students for individualization and mentoring, the necessity of focused education, and the realities of meaningful grade point averages. One of the most common misconceptions, Kerr said, is the idea that all bright students should be guided toward Ivy League institutions. Parents often worry that their child will not get into Harvard or Yale if his or her grade point average dips below 4.0. Many parents and educators seem to believe that Harvard, Yale, and other Ivy League schools are somehow an extension of gifted education programming in high school. This is not the case, however. For some bright students the highly competitive academic environments of Ivy League

colleges are stimulating and exciting. There is no doubt that these colleges are academically competitive, because the nature of their admissions policies ensures that most students who enter are in the 95th percentile of academic achievement. Even the brightest students on a typical state university campus in the Midwest would only be slightly above average among student populations of Ivy League schools. Although these schools provide an opportunity for gifted students to interact with their intellectual peers, sometimes, for the first time, students may experience difficulty from having to go from the top of the class to the middle or the bottom. Gifted students who plan to attend Ivy League colleges should not only have good grades and high achievement test scores, but also high self esteem and a strong sense of self-confidence.

In addition to being aware of the competitiveness of Ivy League schools, students should also take into account the degree of individualized attention and mentoring they are likely to receive. At Ivy League institutions, bright students are common and professors are unlikely to take a special interest in a student merely because of his or her excellent high school achievements. By contrast, at large midwestern state institutions and moderately competitive liberal arts colleges, there are faculty members who actively seek out gifted students for collaboration and mentoring. The tight employment market for professors insures that there are extraordinarily talented faculty members at institutions everywhere throughout the United States and at almost every level of quality. Brilliant, underemployed professors make eager mentors for gifted students. It is not a matter of taking one's chances that a non-Ivy League school might have appropriate faculty and coursework. Instead, for the bright student who has well-defined goals and areas of interest, it may be useful to discover where in the nation the leading scholars in his or her area of interest are currently employed. Contacting these scholars, no matter where they are teaching, could be the first step in discovering a college or university where a student may be able to receive individualized attention.

Another misconception about college planning for gifted students, Kerr said, is that all colleges and universities are looking for well-rounded students who have high grades in all courses and many extracurricular activities. Most colleges and universities are well aware of the difficulties that multipotential gifted students have in selecting a major and narrowing down goals. Three or four inches of fine print under the gifted student's picture in the yearbook is no longer considered the best indicator of the student's potential for success in college. In fact, students with too many extracurricular activities in high school may risk a decline in academic achievement in college if they try to continue the same level of out-of-class involvement. Therefore, colleges and universities are interested in students with moderately active life-styles and focused energies. A student who has pursued three or four extracurricular activities closely related to his or her potential college major or area of academic interest is likely to be seen as a better integrated and more mature student.

Finally, Kerr relates the misconception among gifted students that a 4.0 grade point average is absolutely necessary for all the "best" colleges. Most colleges, however, want students who have achieved good grades in rigorous coursework. A B + average on a high school transcript made up of content-oriented honors courses and advanced courses may be seen as more positive than an A average in an unchallenging, light program. First of all, colleges do want students who will graduate. The best predictor of college grades are high school grades (Astin et al 2004). Therefore, the high school grade point average is an important part of the formula used to predict college student success.

However, there are no colleges that recruit only 4.0 or straight-A students. Instead, colleges are interested in a consistent pattern of high grades. It is assumed that even the best students are likely to receive some grades lower than A's, particularly in nonacademic courses. Few admissions officers are interested in students whose high grade point averages are the result of taking the easiest courses available.

One additional component of most formulae used to predict success in college is the achievement test score. Usually the scores from the SAT and the ACT are used in combination

with the grade point average to predict the success of a student. The college admissions exam is not merely a measure of abstract aptitude for college work; it is also a measure of the rigorousness and thoroughness of the student's course taking. The admissions exams differ slightly in their orientation. The makers of the SAT claim that their test is more of a measure of aptitude, that is, mathematical and verbal reasoning skills. The new SAT, however, includes writing samples and mathematics items that rely much more on actual math coursework. The makers of the ACT explain that their exam is more curriculum-based. Colleges and universities on the East Coast and the West Coast are more likely to use the results of the SAT exam, whereas colleges in the Midwest are more likely to use the results of the ACT exam. Major college admissions and advanced placement tests, along with addresses, are in the Resources section of the book.

Colleges and universities also ask for an application that usually includes essays or statements of purpose, three or more letters of recommendation, and occasionally other supporting evidence. Each institution of higher education has its own unique system for assigning values to the grade point average, the admissions test score, and supporting documents. Although grade point average and admissions exam scores together are the best predictors of success in college, recommendations and applications give admissions officers some sense of the student's character. From these documents, admissions officers hope to learn if the prospective student possesses other qualities besides the chances of succeeding, such as a potential for leadership and a probability that the student will behave ethically and legally.

Gifted students, then, are best advised to work for a meaningfully high grade point average; to prepare both through coursework and study for admissions exams; and to gather documentation that will attest to their good character and potential for being involved and enthusiastic members of the university community.

### **Counseling for College**

Sandra Berger, in her excellent book, *College Planning for Gifted Students* (1989), suggested a college planning time line that begins in *seventh grade*. Seventh grade, according to Berger, is a time for students to explore their community and discover the resources available to help with planning for college. In addition, seventh grade is a time to search for summer programs outside the community that are oriented toward the needs of gifted students. Within the community, seventh-grade gifted students should explore high school magnet schools, opportunities to obtain high school credit, and places to participate in volunteer work. Summer programs sponsored by regional talent searches, universities, and schools are an excellent way to meet other gifted students as well as to discover what it is like to live and work on a college campus. A student and his or her parents should shop around not only for the best bargain in a summer program but also for the program that will provide the most stimulating intellectual experiences and college preparatory experiences.

*Eighth grade*, according to Berger, is the time for the gifted student to develop a master plan, including an academic plan and a time management plan. An academic plan includes all courses required for high school graduation and elective courses, and a time management plan is essentially a life-style planning procedure for assigning the number of hours that will be needed for class homework, extracurricular interests, recreation, and family activities. Eighth grade is also a good time to begin investigating career options. Career interest tests and computer-assisted career guidance programs are available to many students. Occasionally, however, it will be necessary for junior high students to go to a high school guidance counselor or an independent counselor for this preliminary career exploration. This is also a time to continue volunteer work, experiment with new courses, and be involved in extracurricular activities. Summer programs may also follow the eighth-grade year, perhaps as a continuation of a summer program entered the year before or a new one on another college campus.

Berger advises that in *ninth grade*, parents, student, and counselor meet as a group to plan for the student's next 4 years. This planning

group should review the 4-year high school plan, examining which courses might be required for high school as well as various colleges, gaps in the high school offerings that need to be uncovered, and strategies for filling those gaps either through summer programs or out-of-school tutoring. Extracurricular activities should be discussed, and finally, financial planning for college should begin at this point. If the family expects the student to be working in order to pay for part of the college costs, then the type of work and the length of hours should be discussed at this time. Ninth grade is also a time to become familiar with the high school career center and to explore career opportunities in depth. It is probably time for the multipotential student to begin focusing on several extracurricular activities rather than many and to engage in some focused volunteer work.

Berger advises that all gifted students take the Preliminary Scholastic Aptitude Test (PSAT) in October of their *11th-grade* year. Students should take the PSAT mainly as practice, because scores do not count during the 11th-grade year. However, in 11th grade PSAT scores will be used for the National Merit Scholarship Qualifying Test, and it is best for students to be familiar with the types of questions and the nature of the exam. Tenth grade, according to Berger, is also a good time to become familiar with college reference books such as The College Entrance Examination Board's *College Handbook, An Index of Majors*. Counselors may need to guide students through the process of reviewing college reference books because there are so many subjectively organized types of books. Tenth grade is a good time for college visitation, at least for nearby colleges. Berger also advises that gifted high school students take achievement tests at the end of the 10th grade in any subject in which they have done well but are not planning to continue studying, such as foreign languages. Because only three achievement tests are given per session, it is important to take several tests each year if possible. In the 10th grade volunteer work should continue, but Berger also advises that the students consider an internship, travel, or working with an adult who has an interesting career. Career planning can now involve career interest inventories and personality tests. These may be available in high school or at a nearby college or university.

*Eleventh grade* may be the most important year for college planning for gifted students. This is the year in which the PSAT is given in October. PSAT scores will be used for the National Merit Scholarship Qualifying Test. It is also important for 11th graders to sign up to take SATs or ACTs in the spring. Determine which colleges prefer ACTs and which colleges prefer SATs. Berger suggests that if SAT scores are not as high as expected, a preparatory course may be helpful during junior year. More standardized achievement tests should be taken during this year. Advanced placement tests can also be taken during junior year if advanced placement preparation courses have been taken. Because the junior year grade point average may be particularly important to colleges, this is the year when gifted students should concentrate on their academic work. Financial planning should also continue at this point.

Junior year is the time for serious, in-depth exploration of colleges. Berger suggests developing a list of 10 to 20 colleges and working up a comparison chart. This chart should include size, geographic location, course offerings, costs, available scholarships, extracurricular activities, and selectivity. College visits should also begin in junior year if they have not begun already. Anytime the family takes a trip, visits to colleges should be included in that area of the country. Berger suggests visiting several different kinds of colleges—large and small, public and private. During the summer of the junior year, attending another summer institute for the gifted and talented is a good idea. It is particularly important to go to a university-based summer school. Alternatively, a summer internship, travel abroad, or college planning seminars can be useful during this last summer. By the summer of the junior year, gifted students should have requested application forms from about 10 colleges.

*Twelfth grade* marks the year of decision for gifted students. Many college representatives will be available at college nights and other high school visitations. Berger suggests that students make a file of every college they are considering that includes such important information as application

deadlines, financial aid deadlines, notification dates, tests required, costs, recommendations required, and interview deadlines. Any recommendations not yet gathered should be sought during the early part of the senior year. SATs and ACTs should be taken if they have not yet been taken or if a retake is desired. Also, the final achievement tests should be taken during this year.

Students should have SAT and ACT scores sent to their counselor and to the schools to which they are applying. Counselors and students should go over the scores together and arrive at an appropriate interpretation. Berger suggests that students be sure to understand their high school's procedure for sending out transcripts, letters of recommendation, and other materials. It is important that the school's calendar match that of the colleges with early deadlines. Gifted students can often benefit from adding supporting materials to their file in the form of descriptions of courses, descriptions of special opportunities, and explanations of gifted program offerings. Wherever it is possible to have interviews with admissions counselors from colleges and universities, it is important to sign up because the interview may be a deciding factor.

Students should also take time during senior year to prepare the application essay. Any help that guidance counselors and teachers can give is important. Finally, guidance counselors, students, and parents need to work closely together on the actual college decision during the period in the spring when most colleges need to be notified. Time should be set aside for a formal decision-making process. A method for making a decision that includes criteria and goals should be devised by parents, counselor, and student. Once the decision is made, further exploration should include information about orientation courses, registration, and use of advanced placement and other credit.

## Career Guidance for Gifted Students

Even Terman's highly gifted subjects often were found to have had great difficulty translating their extraordinary intellectual ability into meaningful, productive work. Over half of the gifted women became homemakers despite earlier career aspirations; and even those who eventually achieved satisfaction and success had had difficulty deciding among many career options (Terman & Oden, 1935; 1947). More recent clinical case studies and research on the gifted show that the path from youthful talent to adult accomplishment is not always straight and smooth. National Merit Scholars (Watley, 1969), Presidential Scholars (Kaufmann, 1981), and graduates of major learning programs (Kerr, 1985) all have been found to experience problems in career decision making or life planning.

There are, of course, a wide variety of possible explanations for career indecision and vocational dissatisfaction among young gifted adults. This chapter will describe the consequences of having too many choices, too narrow interests, or poor decision-making skills.

One missing ingredient in the development of most gifted individuals is career guidance. Although special educational programs exist for about one third of the gifted in the nation's schools, few include a guidance career component. Most career interventions with gifted and talented students have been developed by universities and colleges as a part of counselor education programs, counseling centers, and career centers (Roper & Berry, 1986).

Kerr's theory of career development for gifted students is based on her conceptualization of the counselor as one person who can challenge and assist students in the resolution of multipotentiality, and her "talent scout" model for supporting gifted students with well

defined and focused career interests(1991) A large body of research exists examining techniques for career counseling with gifted students. Effective strategies used at the Wisconsin Guidance Institute for Talented Students, the Guidance Laboratory for Gifted and Talented at the University of Nebraska, the Counseling Laboratory for Talent Development at The University of Iowa and Arizona State University's TARGETS program for gifted girls are all based on the theory of multipotentiality and the theory of early emergence.

### **Multipotentiality**

Multipotentiality is the cause of most gifted students' difficulties in career development (Kerr, 1981). Multipotentiality is defined as the ability to select and develop any number of competencies at a high level (Frederickson & Rothney, 1972). Gifted students and those who are concerned with their guidance have long recognized that having multiple potentials can be a mixed blessing. Without appropriate career guidance, multipotentiality may become a curse.

A multipotential student may take a vocational test only to learn that he or she is "similar" in interests and abilities to biologists, librarians, musicians, reporters, English teachers, and ministers. Attaining straight A's and uniformly high achievement test scores means that the student cannot make decisions based on what he or she "does best." After graduation from high school, the multipotential student may vacillate between career choices, "delaying career decisions until financial need and the end of a nonfocused education drive the student to take a job by default. As an adult, the multipotential gifted individual may dabble in a series of jobs, finding success but little satisfaction in any. Parents, teachers, and counselors are puzzled throughout the disappointing and spotty career of the multipotential individual. They continue to insist.

"But you could be anything you want to be!" not understanding that this is precisely the problem.

Too often, multipotential students make misinformed, misguided, or just plain wrong career choices. Today's gifted students make career choices based on conformity with peers, money-making potential, and pragmatism, like the rest of their generation (Astin, Green, & Korn, 1988). Unfortunately, the decisions they make are often not related to interests, needs, strongly held values, or even finely developed talent. The study of college major and career choices of the upper 10th, 5th, and 1st percentile scorers on ACT composites (Kerr & Colangelo, 1988) and the study of the choices of those students who scored perfectly on at least one scale of the ACT (English, Math, Social Studies, Natural Science) (Colangelo & Kerr, 1990), showed that the majority of the gifted had narrowed their career interests to business, engineering, pre-med, pre-law, and communications. Recent surveys of college freshman have shown similar patterns, but with stronger interest of gifted students in computer technology and biomedicine (Astin et al, 2004). Although perfect scorers had extraordinary abilities in English, math, science, and social studies, only a small fraction were interested in majors in those areas. It is difficult to achieve a perfect score on any of these scales without unusual amounts of extracurricular reading and home study. Yet, these young people, who may value the study of the liberal arts and sciences above all other activities, seem to be discouraged about actually pursuing careers in these areas.

In the absence of information about themselves-that is, how their talents and personalities compare with others', or information about the world of work-it is no wonder

that gifted students choose "safe" academic majors. It is sad, though, that students who most value and need cognitive challenge ignore many college majors and career choices that offer the greatest possibility of intellectual stimulation.

Multipotentiality is a controversial construct. (Achter, Benbow & Lubinski, 1997). Gifted students are often multipotential because they possess a high level of general ability, which makes them capable of performing capably in almost any intellectual endeavor. Unlike students of average ability, who must make academic and career choices based on their areas of greatest strength, many gifted students must make their choices based on some other criterion than ability. Unfortunately, vocational interests, when measured at grade level by current standardized measures, are also of limited usefulness for career decision-making.

The evidence that multipotentiality poses a significant barrier to effective decision-making is available from modern research, primarily from case studies and longitudinal studies.

Hollingsworth (1926) found that the many subjects from the large pool of gifted students she interviewed had experienced considerable difficulty in choosing from among their many interests, and confining themselves to a reasonable number of enterprises. The term multipotentiality was actually coined at the Wisconsin Research and Guidance Laboratory for Superior Students, which provided research through service programs for students of high academic ability from 1957 until 1984.

Researchers there consistently found that the gifted students attending the laboratory had excellent grades across the board in their coursework, high scores across achievement tests, and multiple expressed interests on vocational instruments (Frederickson & Rothney, 1972; Sanborn, 1979; Perrone, Karshner, & Male, 1979).

At the Study for Mathematically Precocious Youth at Johns Hopkins University, Fox (1978) also found that junior high age gifted students identified by the talent search were higher

on most basic interest scales than non-gifted students. They were particularly high on the intellectually oriented scales, but clearly differentiated patterns of interest were rare. Later studies by SMPY showed males to be fairly well differentiated, with primary interests in investigative occupations, and females to have equally strong interests in investigative, social, and artistic themes (Benbow, 1992). Studies of high school juniors and seniors scoring in the 95th percentile on the ACT show elevated interests across five of the six occupational theme groups, all except business operations (Kerr & Colangelo, 1988).

These studies were followed by a variety of investigations that found differentiated profiles among gifted students. Achter, Lubinski, and Benbow (1997), testing 1000 participants in the Study for Mathematically Precocious Youth, found highly differentiated profiles for this population, and went so far as to say that multipotentiality was “never there, and already vanishing” as a concern for gifted youth. Milgram and Hong (1999) found little evidence of multipotentiality among over five hundred gifted high school senior boys, and also suggested that the concept of multipotentiality be reconsidered. Seijadi, Rejskind, and Shore (2001) also found that gifted adolescent boys were well differentiated on interest profiles.

Why such disparate findings about multipotentiality? Is it indeed vanishing as an issue of concern? Several explanations may account for the inconsistent findings. First of all, those studies that found multipotentiality to be a problem for gifted youth tended to have as their subjects young people who had received high scores of tests of general intelligence (Hollingworth, 1926); high grades across coursework (Perrone, Karshner, and Male, (1979); or high scores across achievement tests (Kerr & Colangelo, 1988). These were students who were clearly multi-talented; therefore, it stands to reason that they would be more likely to have multiple interests as well. On the other hand, most studies that have shown gifted youth to have

highly differentiated profiles have had as their subjects adolescents who are participating in programs for students with highly developed domain specific talents, particularly mathematically precocious youth (Achter, Benbow, & Lubinski, 1996, 1997). Of all the domains, mathematically gifted youth may be the least likely to have difficulty choosing among options: the choices are all too clear: science, engineering, or medicine are each strongly encouraged for these students.

Another issue that has seldom been addressed in the multipotentiality controversy is that there is a strong tendency for differentiated gifted youth to be male. Many of these studies were done primarily with males or with predominantly male groups (Milgram & Hong, 1999; Seijadi, Rejskind, & Shore, 2001) or found differences between males and females, with females less differentiated ( Fox, 1976; Benbow, 1992.) So there is a possibility that there are sex differences, with females being less likely to be differentiated. Kerr and Cohn (2001), reviewing longitudinal studies of gifted boys and men found that gifted males, in general, received more pressure from parents (particularly fathers) to follow linear career paths, deciding early and sticking with career choices even when they were less than happy with the results. Boys with math and science talents whose fathers also had these talents were particularly at risk for foreclosing their options. Females, on the other hand, not only receive much less pressure to decide upon career goals, but are actively encouraged to keep their options open. Kerr (1985) described the difficulty gifted females experience in a “culture of romance” that persistently leads to diffusion of interests and declining focus on career goals in college.

This leads to another problem in making generalizations about gifted students: many of the differentiated students in the SMPY studies were quite young, whereas multipotentiality was more likely to surface among college-bound and college students (Kerr & Colangelo, 1988; Kerr

& Erb, 1991). Therefore, gifted students may actually become more general in their interests as they grow older.

Those students who are participating in programs designed to encourage their interests in math and science careers seem to respond to assessments with more differentiated interests, as the designers of those programs intend. SMPY youth, and gifted girls participating in an NSF program to encourage math and science careers (Kerr & Kurpius, 2001) were likely to show clear interests in investigative careers such as scientist and realistic careers such as engineer.

Finally, it has been suggested that the assessments which are used for average students are inappropriate for gifted students, yielding undifferentiated profiles. Above level ability testing has been successful at documenting individual differences and for predicting differences in achievement (Benbow in Achter et al. 1997). Intellectually gifted children may be precocious in interests as well as abilities. Therefore, using traditional career assessment instruments that were intended for young adults may be suitable for young gifted adolescents. Using the top 1% of high scorers on the SAT, Achter et al. (1996) applied similar concepts of above level ability testing to above level interest testing. Assessing in early adolescence revealed a differentiated pattern of Holland's interest themes. In this manner, traditional career assessment instruments such as the Strong Campbell Interest Inventory (SCII) could reveal individual differences in gifted early adolescents.

### **Characteristics of Multipotential Students\***

#### Elementary School

1. Difficulty with making a choice when given an opportunity to choose a topic or project from among many options.
2. Multiple hobbies with only brief periods of enthusiasm.
3. Difficulty in finishing up and following through on tasks, even those that are enjoyable.
4. Excellent performance in many or all school subjects.

#### Junior High

1. Continued difficulty with decision making.
2. Continued difficulty with follow-through.
3. Continued excellence in many or all school subjects.
4. Multiple social and recreational activities with no clear preferences.
5. "Scheduled up" week with few free periods.

### Senior High

1. Decision-making problems generalize to academic and career decisions.
2. Overly packed class schedule with maximum number of courses.
3. Extraordinary diversity of participation in school activities such as athletics, social club, music, newspaper, plays, and departmental clubs.
4. Chosen and appointed as leader of a wide variety of groups in school, religious activities, and community organizations.
5. High marks in most or all courses taken.
6. "High flat" vocational interest test profiles, showing interests and similarities to an unusually large number of occupations.
7. Occasional signs of stress and exhaustion: absences, frequent or chronic illnesses, periods of depression and anxiety, particularly during busiest times.
8. Delay or vacillation about college planning and decision making.

### College

1. Multiple academic majors.
2. Three or more changes of college major.
3. Continued intense participation in extracurricular activities.
4. Continued outstanding academic performance.
5. Concern and worry over choice of a career.
6. Hasty, arbitrary, or "going along with the crowd" career choice.

### Adulthood

1. Multiple jobs in short time period.
2. Excellent performance in most jobs.
3. General feeling of "lack of fit" in most jobs.
4. Feelings of alienation, purposelessness, depression, and apathy despite high performance and excellent evaluations.
5. Periods of unemployment and underemployment.
6. Pattern of falling behind same-age peers in career progress and sometimes in social development (marriage, family, community involvement).

### Interventions for Multipotentiality

## **Career Education and Guidance**

It should be clear from the foregoing sections that career interventions need to begin very early for gifted and talented students. This does not mean that bright students should be pressured into making early career choices. Instead, career education should be infused into the curriculum and career guidance strategies added to the curriculum to help gifted students progress through the stages of fantasy, exploration, crystallization, and commitment to a career. Career education and guidance for gifted students need to take into account not only their special career development needs, but also their preferences for intellectually challenging materials and methods. Finally, career education and guidance need to be based on the discovery of a vocation or purpose rather than the search for a job. Teaching students how to "package" themselves via resumes and interviewing skills should be deemphasized in favor of teaching students the importance of career development as a search for meaning.

The author has written two career education guides for gifted students, *Career Education for Gifted and Talented* (Kerr, 1982) and *Career Planning for Gifted and Talented Youth* (Kerr, 1990). The following strategies are adapted from these guides.

### **Interventions for Multipotentiality\***

#### Elementary

1. Provide realistic exposure to world of work. Encourage parents to share information about their work; tour work places of parents; tour work places of friends of parents and teachers who are professionals (such as physicians, engineers, college professors, and freelance artists).
2. Encourage career fantasies through dress-up and plays. Keep boxes of costumes and props at home, in the classroom, in the elementary counselor's office.
3. Encourage focus on activities that require goal setting and followthrough (class projects, scout badges).
4. Use biographies of eminent people as primary career education material. Facilitate book discussion groups centered around the lives of eminent people in science, the arts, education, government, and entertainment.
5. Help teachers and parents evaluate skills, talents, and interests carefully in order to help the child understand possible areas of greatest interest.

#### Junior High

1. Help junior high students discuss meaning and value of work.
2. Discuss family and community values pertaining to work.
3. Keep a referral list of light volunteer work in several areas of interest.
4. Provide several "shadowing" experiences in which the student spends the day with an adult working in areas of greatest interest.

5. Discourage overinvolvement in social and recreational activities for the sake of involvement; help students set priorities and decide on a few extracurricular involvements.

#### Senior High

1. Provide appropriate vocational testing for interests, personality characteristics, and values.
2. Arrange visits to college and university classes in a few areas of interest.
3. Encourage more extensive volunteer work.

4. List possibilities of paid internships with professionals.

5. Help student plan a solid curriculum of coursework in order to insure against inadequate preparation for a later career choice.

6. Provide value-based guidance emphasizing choosing a career that fulfills deeply held values.

7. Discourage conformist, stereotyped career choices.

#### College and Young Adulthood

1. Provide career counseling that includes assessment of interests, needs, and values.

2. Encourage enrollment in career planning class. 3. Encourage careful course selection.

4. Help student seek a mentor.

5. Help student engage in long-term goal setting and planning for postsecondary training.

### **Early Emergence**

#### **Theory**

This characteristic of the career development of some gifted students is usually not a concern for individual students, but is often the source of misunderstanding and concern for parents, counselors, and society at large. "Early emergers" (Marshall, 1981) are children who have an extremely focused career interest from a very early age. Kerr's theory of career development for early emergence is based on the need to "scout" out specific, extraordinary talent, support early emerging interests, and provide adequate mentoring in the domain of talent.

Neglecting early emergence means not noticing the talent or interest at all or failing to provide education and resources. Counselors and teachers need to be alert to the appearance of unusual talent and interests not only in traditional academic areas, but also in such areas as inventiveness and leadership. They should also be aware that a child's passion and brilliance at such recreational activities as video games, Dungeons and Dragons, or skateboarding may be a sign of early emerging spatial-visual genius, verbal creativity, and athletic excellence, respectively. Ignoring these abilities because they emerge in play may be costly to the student's career development.

Destroying the early emerger's passion may not be easy, but it is done by belittling the talent or interest ("Who cares about someone who doodles and draws all the time instead of listening?" "So what makes you think you will ever be able to get a job as an anthropologist?"). It can also be done by insisting on "well-roundedness." Although the concept of the "well-rounded" person is deeply embedded in American educational tradition,

research does not support the notion that eminent adults are knowledgeable in all fields or competent in all skills. Too often teachers and parents mistake a specialized interest as evidence of imbalance or poor adjustment when there is no basis for this evaluation. Sometimes parents or schools actively disallow needed training (e.g., refusing to allow a mathematically precocious child to accelerate in math), causing a talent to wither. Finally, overly enthusiastic encouragement and pressure may also remove the intrinsic pleasure the child feels in the interest talent area. When a child's first, tentative explorations of piano playing \_ show precocious ability, too intense a practice schedule and concentrate \_ parental focus may kill the child's natural desire to play well.

#### Research

Research shows passion for an idea and an early commitment to a career area are actually common childhood characteristics of eminent individuals in a wide variety of professions (Cziksentmihalyi, 1999; Bloom, 1985; Kerr, 1985). Therefore, early emergence should not be thought of as a "problem" of career development so much as an opportunity that may be acted upon, neglected, or unfortunately, sometimes, destroyed. In both Cziksentmihalyi's study of creatively eminent individuals and Bloom's study of highest achievers in various domains, actions of parents, teachers, and counselors were critical to good choices. In this studies, acting upon early emergence meant noticing an unusually strong talent or enthusiasm, providing training in skills necessary to exercise that talent, providing resources, and keeping an open mind about the future of the talent or interest. Bloom (1985) gave many examples from case studies of how parents, teachers, and mentors all focused energy upon early emergers who became outstanding performers, athletes, and scholars.

### **Characteristics of Early Emergers\***

#### Elementary

1. Avid interest in only one school subject or activity with only general liking for other subjects and activities.
2. Uneven talent development, with extraordinary talent in - one area and average or above-average performance in others may be mis- takenly labeled as "underachiever").
3. Desire to write most papers or choose most subjects in interest.
4. Early career fantasies about success and fame in the area of interest. - -

#### Junior High

1. Continued highly focused interests.
2. Strong desire for advanced training in area of talent .: 3. Slow development of adolescent social interests because of com- mitment to work in talent area or because of rejection by others. - 4. High performance in talent area, but not necessarily in others. \_

#### Senior High

1. Strongly developed identity in talent area, "the artist," or "the fix-it person."
2. Desire for help with planning a career in area of interest.

3. Desire to test skill in competition with or in concert with peers in the talent area.
4. Continued high performance in talent area, with possible neglect of other school subjects or social activities.

#### College/Young Adulthood

1. Early choice of career or major.
2. Desire for completion of training period in order to "get on with work. "
3. Seeking of mentors in area of interest.
4. Continued intense focus.
5. Possible neglect of social and extracurricular activities.

#### Adulthood

1. Continued intense focus.
2. Desire for eminence or excellence in talent area.
3. Possible foregoing or delay of other aspects of adult development such as marriage, nurturing of younger generation, social and community involvement, and personal development

#### Career Counseling for Early Emergers.

It is unlikely that at any time in the near future instruments will exist that can accurately identify students whose specific, extraordinary talents can lead to eminence in a particular area of performance. Nevertheless, a perusal of the research in particular talent areas will show that particular student behavior, and in some cases, student performance on school tasks and tests, is a good indicator of specific abilities. Therefore, the following list has been constructed by summarizing the research findings in each area of talent. This list is based on Gardner's theory of multiple intelligences and describes behaviors associated with verbal, mathematical, spatial-visual, musical, and leadership talents.

The verbally gifted student may be an avid reader whose knowledge of literature is much more extensive than others; may be a gifted writer whose poetry or prose is more sophisticated than other students; may have excellent grades in language arts and English; may have a gift for learning languages; or may have a sense of humor that leads to a role as the comedian. These students may have high scores on the Stanford-Binet, the WISC-R Verbal, the Miller Analogies Test, or other tests of verbal aptitude.

Has high scores on verbal achievement tests taken out of level, for example, scores above the mean for high school seniors on the SAT-V while still in junior high.

#### *What the Counselor Can Do*

Encourage participation in summer programs, creative writing, journalism, speech and debate, drama. foreign languages.

Encourage entry into writing contests, speech contests, theatre arts competitions.

Seek opportunities for publication through literary magazines, newspapers and book publishers.

Explore colleges and universities with strong creative writing programs (or journalism, theater, or foreign language).

Seek a mentor in local community or at a college or university.

## SPATIAL-VISUAL GIFTEDNESS

### *How It Might Be Discovered*

The student . . .

Draws models or builds with technical skill and imagination

OR

Surpasses peers in ability to create cartoons, paintings, sculpture, or architectural or mechanical models.

OR

Has high scores on WISC-R Performance scale, the Raven Progressive Matrices, or other test of spatial-visual reasoning.

OR

Has high scores on the Figural section of the Torrance Tests of Creative Thinking.

OR

Has excellent grades in art, shop, mechanical drawing, or other courses requiring spatial-visual ability.

Help student find advanced instruction in his or her talent area, Such as a college painting class.

Arrange a mentorship or apprenticeship with an appropriate professional, Such as an architect or mechanic.

Encourage participation in fine arts camps and special arts programs.

Help student to discover the career ladder in his or her area of talent, e.g., for visual arts, building a portfolio and seeking shows for one's work.

Help student locate appropriate postsecondary education at an art institute, college, or university with strong art programs, or in the case of technical or mechanical talent, architecture or mechanical engineering programs.

## MUSICAL GIFTEDNESS

### *How It Might Be Discovered*

The student . . .

Sings or plays an instrument beautifully and seems to love performing.

OR

Surpasses peers in musical knowledge and sophistication in general or in specific areas such as jazz, classical, or rock.

Has unusual musical abilities such as "perfect pitch," or musical memory.

Has excellent grades in music.

Encourage participation in school, community, and church music groups

Encourage participation in music camps and summer programs.

Help student with "audition skills" such as progressive relaxation to overcome performance anxiety.

Explore institutes of music, colleges, and universities with well-known choirs, bands, or orchestras.

## MATHEMATICAL GIFTEDNESS

### *How It Might Be Discovered*

The student . . .

Is a "natural" mathematician, able to do unusually complex computational tasks in his or her head.

OR

Has advanced much farther than peers in math knowledge and understanding.

OR

Has excellent grades in math courses.

OR

Has high scores on math achievement tests taken out of level, for example, scores at the mean for high school seniors while still in junior high.

Help the student to accelerate math learning through special classes, advanced courses, or by skipping ahead in math.

Encourage entry and participation in summer math camps, math competitions, and similar programs.

## INTERPERSONAL GIFTEDNESS

### How It Might Be Discovered

The student . . .

Has held a variety of formal leadership positions.

OR

Frequently rises to positions of informal leadership.

OR

Surpasses peers in ability to listen, communicate, and persuade.

OR

Has high scores on verbal scales of WISC-R or Stanford-Binet.

OR

Has excellent grades in speech, debate, rhetoric, and other courses requiring communication and persuasion skills.

OR

Has high scores on ACT Social Studies

### What the Counselor Can Do

Encourage formal study of leadership through courses on such topics as group dynamics and organizational development.

Explore colleges and universities with strong programs in such fields as political science, business, higher education, law, sociology, or psychology.

Encourage participation in summer leadership camps and conferences.

Encourage participation in community, state, and national organizations where leadership skills can be nurtured.

## Interventions for Early Emergers

### Elementary

1. Help to select measures and strategies for early identification of unusual talents or areas of precocity.
2. Consult with experts on the nature and nurture of particular gifts or talents.
3. Consult with teachers and administrators on ways of nurturing the talent or gift.
4. Encourage fantasies through reading bibliographies and role playing work.
5. Provide opportunities to learn about eminent people in the talent area (attend a concert featuring a famous musician; visit an inventor's workshop in the area; attend a math professor's class).
6. Help teachers design ways of relating other, necessary basic skills to area of interest.
7. Provide lists and guides to opportunities to socialize with children with similar, intense interests through such activities as music camps, computer camps, Junior Great Books.
8. Help parents and teachers strike a careful balance between encouragement and laissez-faire. Provide support for the strong interest along with freedom to change direction. Don't become so invested in the child's talent or interests that you don't notice that the child has changed interests. (Early emergers most often change to a closely related interest; that is, they switch musical instruments or transfer an interest in math to an interest in theoretical physics).

### Junior High

1. Provide support and encouragement during the intensive training that often begins at this point.
2. Encourage students to seek plenty of alone time.
3. Provide opportunities for job "shadowing" (following a professional throughout the working day) in area of interest.
4. Provide opportunities for light volunteer work in area of interest.
5. Caution parents to avoid pressuring the student into social activities.

### Senior High

1. Continue support, encouragement, and alone time.
2. Provide opportunities for internships and work experiences in areas of interest (internship or archaeological dig; camp counselor at fine arts camp; coaching younger people in musical or athletic skill).
3. Provide career guidance referrals to a guidance professional who is *familiar with the talent area* or to a professional in that field.
4. Help the student make a detailed plan of training and education leading toward the chosen career goal, including financial arrangements.
5. Encourage the student to explore higher education or postsecondary training early and thoroughly, with contacts and visits.
6. Help the student establish a relationship with a mentor in the area of interest. Early emergers are often better off in less prestigious institutions where they have access to an enthusiastic mentor than in an Ivy League or high-status institution where they do not.

## College and Young Adulthood

1. Help provide support for extended education and training.
2. Encourage the development of knowledge of "career ladders" in the area of interest (auditions, gallery shows, inventors' conventions, etc. ).
3. Encourage a continuing relationship with a career counseling or guidance professional for support in decision making and problem solving.

### **The Guidance Laboratory Approach as a Counseling Strategy**

The guidance laboratory is a collection of research-based counseling interventions designed to prevent career-related problems (Kerr & GhristPriebe, 1988). For multipotential students, the guidance laboratory offers informational assessment and counseling that culminates in commitment to a specific career goal. For the student who has stereotyped or unconsidered career choices, the guidance laboratory provides the challenge to explore careers that are likely to actualize the student's values as well as to explore the creative synthesis of two or more career areas (e.g., arts management; music therapy; teaching architecture). For the student who has deficits in course preparation, the guidance laboratory offers specific information about requirements for entry into college majors and careers.

The intervention is a 1-day career counseling workshop in which students participate in gender-balanced groups of 8 to 12. As soon as the students arrive, introductions are made, and the students are informed of the day's schedule. Next, all students complete the Self-Directed Search (Holland, 1974) or the Vocational Preference Inventory (Holland, 1985); the Edwards Personal Preference Schedule (EPPS) (Edwards, 1959) or the Personality Research Form (Jackson, 1974); the Rokeach Values Survey (Rokeach, 1982); and a short questionnaire about academic and extracurricular activities. Afterward, students are allowed to select any part of the university to visit (e.g., the computer center or library) and are taken there by a student host. Next, they select and attend a university class related to their area of career interest. After the class visits, students have lunch with guidance laboratory counselors who discuss the morning's experiences, the students' school activities, and future plans in pairs and triads. In the afternoon, students participate in individual and group counseling sessions.

All individual counseling sessions are 50 minutes long. In these sessions, the counselors follow a structured interview schedule designed to (a) clarify interests, needs, and values; (b) indicate understanding of student concerns; (c) encourage practice in goal setting; and (d) influence students to make career decisions based on their interests, needs, and values. To accomplish the first objective, the counselors interpret the results of the assessment instruments, helping the client to synthesize this information. The counselors demonstrate, on the basis of the test results, how each client is unique or special. The following is an example of such an interpretation:

You have a Holland code IES-a very rare code because it combines two very different sets of personality characteristics, the Investigative personality's love of ideas, science, and analysis and the Enterprising personality's interests in selling and persuading. In addition, the "S" for Social in your code and your EPPS scores on Need for Affiliation (90th percentile) and need for Exhibition (95th percentile!) show that you have a special affinity for people and being out in front of people. I'll bet Carl Sagan has a profile like this-and I'll bet that you, too, would be very good at selling scientific ideas

to the public. Your highest values, Knowledge and Friendship, certainly seem to fit; what do you think'?

To encourage the practice of goal setting, counselors present clients with a goal-setting sheet. In this exercise, they suggest that clients choose any future goal—perhaps based on the test interpretation discussion—and describe, on the goal-setting sheet, the steps necessary to take this week, this month, this year, and thereafter to attain the goal.

The counselors help clients to focus by giving information and encouragement. Finally, they help clients to feel understood and supported by using verbal following and open-ended questions throughout the interview. Also, they demonstrate their support by showing curiosity rather than ignorance when their clients discuss topics such as science fiction or violin concertos, about which the counselors might know very little.

All students also participate in a group life planning session with a counselor and four to seven students. The objectives of this session are to focus on specific aspects of the students' desired future life-styles and to identify barriers as well as possibilities in attaining those life-styles. To accomplish these objectives, the counselor leads the students in a "Perfect Future Day" fantasy (Zunker, 1983) in which students imagine an entire working day 10 years in their own future. After the fantasy, students are led in a discussion of possibilities and barriers, with the counselor encouraging high aspirations and giving information when necessary.

The workshop ends with a short lecture reiterating the purposes of the workshop and encouraging continued career decision making. Evaluations of the workshop are distributed, and students are given an opportunity to request additional counseling anonymously. Additional materials for the guidance laboratory are included in the Resources section.

The guidance laboratory approach has been found to be effective in stimulating gifted students to begin the process of career exploration. Students who have attended the guidance laboratory are more likely to discuss their career plans with parents, teachers, and counselors and to have followed up on career ideas than students who have not attended (Kerr & Ghrist-Priebe, 1988). Gifted girls who attend the guidance laboratory tend to raise their career aspirations, and gifted boys maintain their high career aspirations (Kerr, 1983). Finally, a variant of the guidance laboratory approach, when applied to college students, seems to be effective in enhancing gifted students' sense of purpose and identity (Kerr, 1990).

Therefore, counselors should consider the possibility of arranging a partnership with the counseling or career center of a nearby college or university for the purpose of career guidance for gifted students. Guidance laboratories are that rare case in which a well-planned, 1-day experience can have a powerful and lasting effect on the fulfillment of bright students' career potential.

### **Summary**

Lack of appropriate career guidance can prevent gifted students from achieving their full potential. Gifted students have unique career development needs. Multipotential gifted students do many things well and have a wide variety of interests; they often need help with focusing on a limited number of activities and with goal setting. Early emergers need help in coping with their precocious passions; counselors need to support them in the face of discouragement. Values-based interventions may be particularly helpful to gifted students who are seeking meaning and purpose as well as a career.

## References

- Astin, A., Green, K. C., & Korn, W. S. (1988). *The American freshman: Twenty year trends*. Los Angeles: Higher Education Research Institute. Bloom, B. S. (1985). *Developing talent in young people*. New York: Ballantine Books.
- Colangelo, N., & Kerr, B. A. (1990). Extreme academic talent: Profiles of perfect scorers. *Journal of Educational Psychology* 82, 404-409. Colangelo, N., & Zaffran, R. A. (1979). *New voices in counseling the gifted*. Dubuque, IA: Kendall-Hunt
- Cox, J., Daniel, N., & Boston, B. O. (1985). *Educating able learners: Programs and promising practices*. Austin, TX: University of Austin Press. Edwards, A. L. (1983). *Edwards Personal Preference Schedule*. New York: Psychological Corporation.
- Fox, L. H. (1978). Interest correlates to differential achievement of gifted students in mathematics. *Journal for the Education of the Gifted* 1, 24-36. Frederickson, R. H., & Rothney, J. W. M. (1972). *Recognizing and assisting multipotential youth*. Columbus, OH: Merrill.
- Holland, J. (1974). *Self-Directed Search*. Palo Alto, CA: Consulting Psychologists Press.
- Holland, J. (1985). *The Vocational Preference Inventory*. Odessa, FL: Psychological Assessment Resources.
- Hollingworth, L. S. (1926). *Gifted children: Their nature and nurture*. New York: Macmillan.
- Jackson, D. N. (1974). *The Personality Research Form*. Odessa, FL: Psychological Assessment Resources.
- Kaufmann, F. (1981). The 1964-1968 Presidential Scholars: A follow-up study. *Exceptional Children*, 48, 2.
- Kerr, B. A. (1981). Career education strategies for gifted and talented. *Journal of Career Education*, 7, 318-325. Reprinted in *Chronical Guidance Professional Series*, p. 994, 1982.
- Kerr, B. A. (1982). *Career education for the gifted and talented*. Columbus, OH: ERIC Clearinghouse on Adult, Career and Vocational Education.
- Kerr, B. A. (1983). Raising aspirations of gifted girls. *Vocational Guidance Quarterly*, 32, 37-44.
- Kerr, B. A. (1985). *Smart girls, gifted women*. Columbus, OH: Ohio Psychology.
- Kerr, B. A. (1990). Career planning for gifted and talented youth. In Berger, S. *Flyer files on gifted students* Reston, VA: ERIC Clearinghouse on Handicapped and Gifted Children.
- Kerr, B. A., & Colangelo, N. (1988). The college plans of academically talented students. *Journal of Counseling and Development*, 67(1), 42-49.
- Kerr, B. A., & Ghrist-Priebe, S. (1988). Intervention for multipotentiality. *Journal of Counseling and Development*, 66(8), 366-370.
- Marshall, B. C. (1981). Career decision-making patterns of gifted and talented adolescents. *Journal of Career Education*, 7, 305-310.
- Perrone, P., Karshner, W., & Male, R. (1979). *The career development needs of talented students*, University of Wisconsin (ERIC No. ED 185 731). Rokeach, M. (1982). *Rokeach Values Inventory*. Sunnyvale, CA: Halgren Press. Roper, C. J., & Berry, K. (1986). College career centers: Reaching out to the gifted and talented. *Journal of Career Development*, 13(1)- 26-30. Sanborn, M. P. (1979). Career development: Problems of gifted and talented

- students. In N. Colangelo & R. Zaffrann (Eds.). *New voices in counseling the gifted* (pp. 186-196). Dubuque, IA: Kendall-Hunt.
- Terman, L. M., & Oden, M. H. (1935). The promise of youth. *Genetic studies of genius*, Vol. 3. Stanford: Stanford University Press.
- Terman, L. M., & Oden, M. H. (1947). The gifted child grows up. *Genetic studies of genius*, Vol. 4. Stanford: Stanford University Press.
- Watley, D. J. (1969). *Stability of career choices of talented Youth*. Evanston, IL: National Merit Scholar Corporation.
- Watley, D. J., & Kaplan, R. (1970). *Merit scholars and the fulfillment of their promise*. Evanston, IL: National Merit Scholar Corporation.
- Zunker, A. (1983). *Career counseling*. Monterey, CA: Brooks-Cole.

## References

- Astin, A., Saxe, L., Korn, W.S., & Mahoney, J. (2005) the American Freshman: National Norms for Fall of 2004.
- Berger, S. L. (1989). *College planning for gifted students*. Reston, VA: ERIC/ CEC Clearinghouse on Gifted and Handicapped Children.
- Colangelo, N., & Kerr, B. A. (1990). Extreme academic talent: Profiles of perfect scorers. *Journal of Educational Psychology*, 82, 404-409.
- Hall, R. M., & Sandier, B. R. (1984). *Out of the classroom: A hostile campus climate for women.* Washington, DC: Project on the Status and Education of Women.
- Kerr, B. A., & Colangelo, N. (1988). College plans of academically talented students. *Journal of Counseling and Development* 67( 1), 42-49.
- Kerr, B. A., Colangelo, N., Maxey, J., & Christensen, P. (1992). Characteristics and needs of academically talented minorities. *Journal of Counseling and Development*, 70, 606-609.