

Educating Gifted and Talented Youth for High-Level Expertise and Creative Achievement

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Longitudinal research on the development of gifted and talented youth suggests that they profit from accelerated, fast paced, and challenging instruction. The research also shows that educational services focused on their special talents may be more effective than general enrichment programs. Ideally instruction and educational programs should be designed to help precocious youth achieve at very high creative levels or to attain high level and creative expertise.

Key words: talent development; high level creative achievement; accelerated and challenging instruction

What are the special educational “needs” of gifted and talented youth? Do general school programs, counseling services, and curricula fail to meet those needs? (Davidson & Davidson, 2004; Feldhusen, 2003; Moon, Kelly, & Feldhusen, 1997) What happens to precocious youth who get no special

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instruction or curricula? Should the education of gifted and talented youth be viewed as tutelage, not group instruction? Should counselors be knowledgeable about and involved in providing educational services for the gifted and talented? Should we expect gifted and talented youth to go on to high-level positions, expertise, and creative achievement in adulthood?

This paper addresses two major questions: (1) what do results of some major research projects tell us about the long-range achievements of children identified early in their lives as gifted and talented?, and (2) what are the educational implications of those findings? The answers to these questions should provide guidance for teachers of the gifted and talented, coordinators of gifted programs, school administrators, state offices for the gifted, curriculum developers, counselors, and college or university professors who teach courses and conduct research on gifted education.

Some large-scale longitudinal research on highly precocious youth suggests no need for special programs or enrichment, but some suggest that "accelerated" instruction promotes high-level, creative achievement (Freeman, 2001; Gross, 2004; Holahan & Sears, 1995; Hollingworth, 1990; Lubinski, Webb, Morelock, & Benbow, 2001; Moon, Feldhusen, & Dillon, 1994; Terman, 1959).

Follow-ups of gifted youth into adulthood, midlife and old age were carried out by Terman and his associates (Terman, 1925; Terman & Oden, 1947, 1959) and Holahan and Sears (1995). They found that a large number of the youth who had been identified as gifted because they had IQs at or higher than 135 at age 12 grew up to be professionals, artists, writers, etc., and undoubtedly earned very substantial incomes. However, they came through schools and colleges at a time when there were no or few special programs for the gifted. Many had been accelerated by early admission and/or grade skipping, particularly those who were successful and highly creative achievers in adulthood. It should also be acknowledged that a large number of the students, who had been identified at age 12 as highly gifted, were in mediocre occupations as adults, and earning low or average salaries.

Terman's research had also revealed that the successful and high achieving students were characterized by high motivation to achieve in childhood and adolescence. He also found that few of the low achievers had been accelerated in school.

Lita Hollingworth (1926, 1942) worked with children who had very high IQs (180 and above). Her work involved the development of educational programs and curricula for highly precocious students in the Lab School at Hunter College and the Speyer School in New York City. Like Terman she also found that they, in large numbers, went on to high-level success in higher education and in career achievements. The achievements of a sample of Hollingworth's subjects are well documented by Harris (1998). However, contrary to Terman's finding of good personal and social adjustment among the gifted in his sample, she found several areas of social and emotional problems among the youth in her sample. Perhaps the problems grew out of her failure to offer accelerated learning opportunities.

Another recent follow-up of a large group ($N = 320$) of highly precocious youth (Lubinski et al., 2001) who were identified on/or before age 13 and followed for over 10 years showed truly remarkable achievement. Most (96%) had had some form of educational acceleration. Over half were pursuing doctorates and many attended the best or major universities. Many had published papers, secured patents, and won prestigious awards.

Moon et al. (1994) carried out a longitudinal study of the effects of the Purdue Three-Stage enrichment model (Feldhusen & Kolloff, 1978, 1986; Feldhusen, Kolloff, Cole, & Moon, 1988) with gifted students who had been identified in grades 3-6 and evaluated 10 years later when they were high school seniors. The results of the study indicated that the enrichment program had positive effects on the children's thinking skills (creative thinking and problem solving, capacity for independent study, talent development, academic motivation, and social interaction with gifted peers). Negative effects were minimal, but several subjects reported that participation in this pullout enrichment program made regular classroom instruction seem more boring.

Thus, we return to the original question, is there any clear evidence that highly able, precocious youth need or profit from special educational programs, services, and curricula, and go on to high-level achievement and successes? The answer seems to be yes, programs that are accelerated and focused on developing high-level thinking skills do have a long-range, positive impact on gifted students. While the children in the Hollingworth project had special instruction and curricula, many of Terman's students, however, seemed to have achieved high occupational levels and salaries without special education except for abundant opportunities for acceleration.

Gross (2004) has been carrying out intensive case studies of highly gifted students in Australian schools. Their IQs ranged from 130–200. They were identified in 1988–1989 and followed through 2003. The achievements in school have been truly remarkable, particularly if they had been accelerated in some way and their personal and social adjustment good if they had had access to good teachers and challenging instruction.

The special services and programs for gifted, talented, and precocious students vary in design and quality. For students identified as gifted, the special educational program might be pullout from the regular classroom for an hour or two or a day a week for enrichment activities or full-time enrollment in a special school for the gifted. For talented youth (Feldhusen, 1996) the service might include enrollment in a special class during or after school in the student's talent or talent strengths such as music, mathematics, drama, leadership, or aeronautics (Feldhusen & Sayler, 1990). For highly precocious students the service might include early admission to school (Feldhusen, 1992; Proctor, Feldhusen, & Black, 1988), grade advancement, and enrollment in special grouped classes in the basic subject areas, enrollment in a special school for the gifted or enrollment in a residential school for highly able youth (Feldhusen, 1991; Feldhusen, 1995; Feldhusen & Jarwan, 1995; Jarwan & Feldhusen, 1994).

All of these options probably offer educational advantages that may help students learn or achieve to higher levels than would otherwise be possible (Feldhusen & Kennedy, 1989; Feldhusen & Moon, 1992). Translated

into high-level achievements in adulthood, society at large may profit from the service and aesthetic experiences these youth bring to society in their adulthood.

Recent research also suggests that programs for the gifted and financial support for such programs should especially be focused on youth's specific talents (Feldhusen, 1995; Gagne, 1999) or intelligences (Gardner, 2004) and on helping gifted youth understand their own talents and set short- and long-term professional or artistic goals (Feldhusen & Wood, 1997; Feldhusen, Wood, & Dai, 1997; Kay, 1999).

Some Guidelines for Instruction of Gifted and Talented Students

Gifted, talented, precocious youth should have active minds and bodies that do not passively await stimulation, instruction, and/or services to meet their needs for intellectual and artistic growth. Several of the rating scales used to identify gifted, talented, and precocious youth include items having to do with their active minds, motivation to achieve, questioning behavior, and curiosity. Boredom should never be characteristic of these students, although they may sometimes have to struggle to find ways to cope with inappropriate and low-level instruction, teaching, and curriculum. It may take real creative insights for a gifted, talented student to find a way to read a book in his or her lap during instruction on things already known well, to ask questions that probe beyond rudimentary aspects of the lesson, or simply to sit and ponder the fourth dimension of the lesson being taught. But ideally, school offers gifted education programs, services and curricula that fulfill the needs of all students, including the gifted and talented.

Advanced, accelerated, high-level, challenging, complex, demanding — these are all appropriate terms for the expectations that should characterize gifted education. An aim of gifted education is to turn on goal-setting behaviors that lead gifted and talented youth to strive for lofty and creative achievements, occupations, and careers. Along the way there is tremendous acquisition of

information, ideas, and cognitive skills, all committed to long-term memory. And in that memory, information gets organized into conceptual frameworks and interrelationships. All knowledge is also highly retrievable, useable in the skills of solving problems and/or creating new things.

Gifted education is, of course, a two-sided endeavor. On one side, is the teacher who brings the accelerated challenging curricula, instructional methods, and motivating stimulation to the learning situation. On the other side, is the gifted and talented youth who brings motivation and an emerging base of conceptual knowledge, cognitive skills, and maturation to the classroom.

Gifted education in public schools should probably take one of three basic forms: acceleration or special groupings, and advanced curricula. All three can be accomplished by moving a precocious youth to classes at higher grade levels, to special high-level curricula, and by enrollment in honors and Advanced Placement classes. If there is a nearby college or university, gifted students can take college courses concurrently with high school enrollment.

Summation

From all the discussion of the pros and cons of various approaches to gifted education we conclude that there are at least four basic principles that might guide our efforts to provide good, ideal, or optimum educational classes, programs, services, teaching, and curricula for gifted and talented children. First, it seems clear that their high IQs and achievement test scores tell us that they are highly precocious, far above average in their intellectual achievements, and ready for instruction at a fast pace and at advanced levels. Otherwise called acceleration, this is likely to be the most resisted consideration in a vast majority of schools. We track students by age (Feldhusen, VanWinkle, & Ehle, 1996) nowadays, not by what they know or are ready for in new instruction. However, at the middle and high school levels some doors begin to open: the chance to take some high school courses in grades

seven and eight, the opportunity to take college or Advanced Placement courses in high school, or the chance to enter college early (Robinson & Janos, 1986).

Fast-paced courses are ideal for precocious learners who otherwise may be bored in school if they can't find personally satisfying alternatives (Feldhusen & Kroll, 1991), but such classes are rarely available except in Saturday and summer programs at colleges or universities. The challenge of being instructed at advanced levels and speeded up is motivating and thrilling to many talented youth and may explain why the students in the Terman sample who had been accelerated in school also became more highly motivated to achieve at high levels. It is also essential that gifted and talented youth grow, from an early age, in understanding of their emerging special aptitudes or talents. Their teachers, parents, and counselors should provide information and insights that help them grow in that understanding. Youth can begin taking talent-focused classes in after-school, Saturday, and summer programs (Feldhusen & Ruckman, 1988). The Saturday and summer programs at Purdue University have offered classes for precocious and talented students in foreign language, chemistry, biology, engineering, art, literature, mathematics, etc., for many years (Feldhusen, 1991) as an approach to helping precocious youth come to understand their emerging, specific talents (Feldhusen, 2000; Gagne, 2000). Lubinski et al. (2001) found that youth who went on to high-level, creative achievements had been able early in their lives to have educational experiences and test results that helped them grow in knowledge and understanding of their special talents. It is also important to emphasize that understanding of one's talents should be guided to a large extent by school counselors. That guidance should include once a year review of students' emerging abilities and achievements and comprehensive educational and career goal setting (Feldhusen, Wood, & Dai, 1997). Finally, there is a clear need for those who concern themselves about gifted and talented youth to provide curricula and instruction that is characterized by cognitive depth. Sternberg (2000) advocates a focus on the thinking skills of reasoning, critiquing, judging, comparing,

assessing, as well as the creative thinking skills of imaging, hypothesizing, and inventing. Decades ago curriculum developers were guided by Bloom (1956) and the taxonomy of thinking skills that stressed comprehension, analysis, synthesis, and evaluation of conceptual material. Maker and Nielson (1995), focusing explicitly on curriculum for the gifted, urged attention to the content, problem solving, the products, and acceleration. And, more recently, VanTassel-Baska (2000) sets forth principles for curricula for the gifted stressing cognitive depth and complexity as well as acceleration and enrichment. From these several scholarly guides we conclude that "cognitive depth" means that the curriculum and instruction is characterized by a variety of challenging academic activities that seek to develop talented youths' abilities to think, to observe and analyze, to reason, to judge and evaluate, to understand relationships among concepts, and to integrate ideas, and above all, to become fluent in using their knowledge bases in a wide variety of cognition-based activities such as designing, planning, solving problems, composing, inventing, writing poetry, painting, playwriting, research, writing essays, etc.

It seems unfortunate that enrichment programs for gifted and talented youth are guided only by replication of interesting activities modeled on other programs. There is also excess attention to personal and social problems of gifted youth without attention and understanding of the linkage or cause of those problems by schools' failures to provide sound, well-designed programs, classes, curricula, and teaching as delineated in the principles set forth in this essay.

Ideally, the gifted, talented, precocious child spends all of his or her school time in a school for the gifted, like Pine View School for the Gifted in Sarasota Florida, or Sycamore School for the Gifted in Indianapolis Indiana, stimulated by intellectual and/or artistic peers, learning from a high-powered and advanced curriculum and with teachers who understand well the needs and nature of gifted, talented, and precocious students, and deliver fast-paced, intellectually stimulating, and cognitively in-depth instruction. Such powerful school experiences should help precocious youth

achieve at high creative levels as adults, offer substantive services to society, and find satisfaction in personal fulfillment.

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