

# CEC-TAG – NAGC Standards Knowledge/Skills Evidence-Base FOR GIFTED AND TALENTED EDUCATION STANDARDS

## Standard 1: Foundations

Educators of the gifted understand the field as an evolving and changing discipline based on philosophies, evidence-based principles and theories, relevant laws and policies, diverse and historical points of view, and human issues. These perspectives continue to influence the field of gifted education and the education and treatment of individuals with gifts and talents both in school and society. They recognize how foundational influences affect professional practice, including assessment, instructional planning, delivery, and program evaluation. They further understand how issues of human diversity impact families, cultures, and schools, and how these complex human issues can interact in the delivery of gifted and talented education services.

### GT1K1

**Historical foundations of gifted education including points of view and contributions of individuals from diverse backgrounds.**

#### Research-based References

Galton, F. (1865). Hereditary talent and character. *Macmillan's Magazine*, 12, 157-166. 318-327.

Using statistics, Galton examined distributions of traits. He developed a theory that intelligence ranged widely across the general population (according to the general laws of distribution) and that a certain segment of the population was endowed with a significantly higher degree of intelligence.

Hollingsworth, L. S. (1942). *Children above 180 IQ*. Yonkers, NY: World Book Company.

Hollingsworth defined the thresholds for IQs in the upper ranges and recognized a distinction between the ranges within superior mental ability. Those children with a 180 IQ and above posed special challenges to a school system in which children with this significant mental endowment could rarely be satisfied socially or academically. In her study of children who tested above 180 IQ, she found that when they became adults that original research was often spontaneously and successfully undertaken.

Terman, L. M. (1925). *Genetic studies of genius*. Palo Alto, CA: Stanford University Press

This five-volume set focuses on a longitudinal study of 1,528 gifted children who scored above 135 on the Stanford-Binet intelligence test. Terman concluded that gifted students were (a) qualitatively different in school, (b) slightly better physically and emotionally in comparison to normal students, (c) superior in academic subjects in comparison to the average students, (d) emotionally stable, (e) most successful when education and family values were held in high regard by the family, and (f) infinitely variable in combination with the number of traits exhibited by those in the study.

#### Literature/Theory-based References

Borland, J. H. (1990). Leta Hollingsworth's contributions to the psychology and education of the gifted. *Roeper Review*, 12, 162-166.

Borland views Hollingsworth's contributions to the field of gifted education at the same level as Terman and Galton's. *Gifted Children. Their Nature and Nurture* (Hollingsworth, 1926) was the first comprehensive textbook on the education and psychology of gifted children and was based on direct observation and interaction with gifted children as well as laboratory research. Hollingsworth examined the effects of the "gifted" label and accelerated curriculum. She examined the issue of whether gifted students should acquire knowledge or produce original work. She believed that knowledge beget knowledge; opportunity and nurture

play a role in giftedness instead of solely genetic inheritance.

Gallagher, J. J., & Weiss, P. (1979). *The education of gifted and talented students: A history and prospectus*. Washington, DC: Council for Exceptional Children.

The authors include the history of gifted education programs from 1955-1979, the present state of gifted education, and prominent trends in the field.

Heller, K. A., Mönks, F. J., Sternberg, R. J., & Subotnik, R. F. (Eds.) *International handbook of giftedness and talent*. New York: Elsevier.

This reference provides articles related to the changing conceptions of giftedness and talent, the development of giftedness and talent, identification of giftedness and talent, gifted education and programming, counseling and nurturing giftedness and talent, examples of country effort, and the present and future of research and education of the gifted and talented.

Karnes, F. A., & Nugent, S. A. (2004). *Profiles of influence in gifted education: historical perspectives and future directions*. Waco, TX: Prufrock Press.

This reference provides individual profiles of more than 50 of the field's most influential leaders, events and milestones that have shaped gifted and talented education, and summaries of major events. It also includes a critical examination of changes suggested by these professionals.

Kaufman, J., & Sternberg, R. (2006). *The international handbook of creativity*. University of Cambridge Press.

This handbook presents an international and diverse set of perspectives on the psychology of human creativity. Leaders in the field of creativity discuss a wide range of interdisciplinary issues and topics.

Tannenbaum, A. (1983). *Gifted children: Psychological and educational perspectives*. New York: Macmillan.

Tannenbaum's narrative explored the recognition of giftedness in ancient Greece, the Bible, during the Renaissance, and up through modern times. He also outlined a variety of theories, special programming within schools, and the dramatic changes that the field of gifted education underwent due to Sputnik.

Tannenbaum, A. (2000). A history of giftedness in school and society. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.) *International handbook of giftedness and talent* (pp. 23-53). New York: Elsevier.

In this updated history of gifted education, Tannenbaum provides Western perspectives on domains of excellence, ancient origins of interest in the gifted, the modern period, present and future trends, and the study of giftedness at the beginning of the twenty-first century.

## Standard 1: Foundations

### GT1K2

#### Key philosophies, theories, models, and research that supports gifted education.

##### Research-based References

Gentry, M., & Owen, S. V. (1999). An investigation of the effects of total school flexible cluster grouping on identification, achievement, and classroom practices. *Gifted Child Quarterly*, 43, 224-243.

This paper presents the findings of a longitudinal, causal comparative investigation of an elementary school cluster grouping program. Both quantitative and qualitative methodologies were used. Although the cluster grouping program was originally designed to provide differentiation of content and instruction for gifted students, positive effects were also found on the achievement of all students in the school. During the three program years, students involved in the school using cluster grouping were more likely to be identified as high achieving or above average. Fewer students were identified as low achieving. A significant increase in

achievement test scores of all students was found when these students were compared to similar students from a comparison school district. Qualitative analyses yielded three core categories—the use of grouping, the impact of teachers, and the general school environment—that helped to provide an understanding of the quantitative findings. (Authors' abstract).

Gross, M. U. M. (1992). The use of radical acceleration in cases of extreme intellectual precocity. *Gifted Child Quarterly*, 36, 91-99.

This paper reviews the school histories of five extremely gifted children, of IQ 160-200, who have been radically accelerated. Prior to their acceleration, the children were retained in the regular classroom in a lockstep curriculum based on their chronological age and grade placement. They suffered severe intellectual frustration, boredom, lack of motivation, and social rejection by age-peers, and displayed significantly lowered levels of social self-esteem. A combination of grade-skipping and radical subject matter acceleration has given the children access to curricula commensurate with their academic achievement levels and the intellectual and social companionship of children who share their abilities and interests. The young accelerands are more stimulated intellectually, enjoy closer and more productive social relationships, and display healthier levels of social self-esteem than do equally gifted children who have been retained with age-peers of average ability. (Author's abstract).

Hertzog, N. B. (2003). Impact of gifted programs from the students' perspectives. *Gifted Child Quarterly*, 47, 131-143.

Fifty college students were interviewed about their prior experiences in gifted programs and their perspectives on the impact of these experiences on their lives. Interview questions probed the types of experiences they remembered, including the types of instruction they had, their relations with peers, and their views about how their experiences in gifted programs affected other parts of their lives. Teachers in gifted programs engaged students in high-level thinking, spent less time on discipline, and created a better overall classroom atmosphere in gifted, as compared to general education classes. Students said that gifted programs gave them a "work ethic" and a "better education." (Author's abstract).

Moon, S. M., & Feldhusen, J. F. (1994). The program for academic and creative enrichment (PACE): A follow-up study ten years later. In R. F. Subotnik & K. D. Arnold (Eds.) *Beyond Terman: Contemporary longitudinal studies of giftedness and talent* (pp. 155-185). Norwood, NJ: Ablex.

This longitudinal study examined the effectiveness of an enrichment program on participating children. The authors concluded that when the talents of the identified children are nurtured for at least three years by a theoretically sound enrichment program, there is a relationship between early identification and high performance in one or more talent areas as an adolescent.

Subotnik, R. F., & Steiner, C. L. (1993). Adult manifestations of adolescent talent in science. *Roepfer Review*, 15, 164-169.

This study examined the 98 men and women among the 300 semi-finalists and finalists of the 1983 Westinghouse Science Talent Search. At 26 years of age, 49 of the 60 male participants and 25 of the 38 female participants could be categorized as scientists or mathematicians. The 11 men and 13 women left science because other fields were more attractive; mentors in science were unavailable; parents and secondary school officials gave inappropriate guidance; and/or undergraduate science instruction was of low quality. The authors conclude that the data confirm the poor quality of science education in the United States.

### **Literature/Theory-based References**

Arnold, K. D., & Subotnik, R. F. (Eds.)(1994). *Beyond Terman: Contemporary longitudinal studies of giftedness and talent*. Norwood, NJ: Ablex Publishing.

This book presents 14 different longitudinal studies. In their summary of these studies, Arnold and Subotnik conclude that (a) subjects had stable interests; (b) identification was tied to program goals; and (c) families and mentors influenced the development of talents.

Benbow, C. P., & Lubinski, D. (1996). *Intellectual talent: Psychometric and social issues*. Baltimore, MD: Johns Hopkins Press.

Topics included in this resource book genetic antecedents to human behavior, the underuse of knowledge, proper provisions for gifted students, the use of knowledge, psychometrics, and genius. It provides a review of the current research on individual differences, its relevance to intellectual talent, and current knowledge about educating gifted children.

Bloom, B. S. (Ed.)(1985). *Developing talent in young people*. New York: Ballantine.

Bloom describes talent as an “unusually high level of demonstrated ability, achievement or skill in some special field of study or interest” (p. 3). In talent development both individuals and society benefit. During the early stage of talent development, learning is informal and encouraged by parents and special teachers who made lessons “fun” and did not judge the performance. During the next stage, the individual’s knowledge and skills are developed. At the final stage students begin working with teachers/mentors known for their accomplishments and expertise.

Coleman, L. J., Sanders, M. D., & Cross, T. L. (1997). Perennial debates and tacit assumptions in the education of gifted children. *Gifted Child Quarterly*, 41, 105-111.

This article describes the assumptions of three modes of inquiry regarding gifted education: empirical-analytic, interpretivist, and transformative. The different paradigms disagree on the definition of giftedness, identification, and curriculum. A proposed consensus statement is given: “The purpose of the field of gifted education is to identify gifted children in order to place them into programs with appropriate curriculum and with teachers who possess the necessary characteristics and skills for maximizing each student’s potentials” (p. 107).

Feldman, D. (1980). *Beyond universals in cognitive development*. Norwood, NJ: Ablex.

Feldman’s theory describes universal and nonuniversal forms of development. Universal refers to the attainment of complex processes that occur in all normal persons. On the other hand, nonuniversal refers to the attainment of complex processes that are tied to specific domains and must be developed.

Shore, B. M., Cornell, D. G., Robinson, A., & Ward, V. S. (1991). *Recommended practices in gifted education: A critical analysis*. New York: Teachers College Press.

The authors identified 101 recommended practices in gifted education from a review of 100 books. These practices were grouped into related sets under noncurricular issues; curricular and teaching strategies; family, counseling and personal adjustment; and special groups and reviewed according to the knowledge base found in journals. The authors indicate which ones are strongly supported practices in the research literature, which have some support, which have elements of both support and refutation, which have insufficient research to make a judgment about support, which are applicable to all children, which have insufficient evidence, and which are strongly refuted.

Southern, W. T., & Jones, E. D. (1991). *The academic acceleration of gifted children*. NY: Teachers College Press.

The authors describe 15 different types of acceleration and the history of academic acceleration. Subsequent chapters debate early admission, children who are young-in-grade, social and emotional development, dangers and benefits of acceleration, accelerative options, evaluation, and administrative implications.

Sternberg, R. J. (2000). Giftedness as developing expertise. In K. A. Heller, F. J. Monks, R. J. Sternberg, & R. F. Subotnik (Eds.) *International handbook of giftedness and talent* (pp. 55-66). New York: Elsevier.

Sternberg views gifted levels of abilities as forms of developing expertise. Expertise is developed through “purposeful and meaningful engagement in a set of tasks relevant to the development of expertise” (p. 63). Given environmental and genetic differences not all individuals will reach their ultimate level of expertise.

Sternberg, R. J., & Davidson, J. E. (Ed.)(2006). *Conceptions of giftedness*. New York: Cambridge University Press.

The authors describe the major conceptions of gifted and how they apply to identification, instruction, and the

assessment of gifted students. Represented conceptions include Brody and Stanley, Callahan and Miller, Cross and Coleman, Feldhusen, Gagné, Reis, Renzulli, Robinson, Runco, Simonton, Sternberg, Subotnik and Jarvin, VanTassel-Baska, Winner, Wahlberg and Paik.

Torrance, E. P. (1962). *Guiding creative talent*. Englewood Cliffs, NJ: Prentice-Hall.

Torrance assessed creativity using fluency, flexibility, elaboration, and originality. He found that the growth of creativity is not continuous across grades and varied according to gender. Girls were more reluctant to think creatively than were boys. Creative students fare somewhat better with creative teachers; although peer sanctions operate against the most creative children.

Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. (M. Cole, V. John-Steiner, S. Scribner, E. Souberman, Trans.) Cambridge, MA: Harvard University Press.

Vygotsky's theory describes learning and development as interrelated. He proposed the existence of a zone of proximal development in which the "actual developmental level is determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

### Practice-based References

Davalos, R., & Haensly, P. (1997). After the dust has settled: Youth reflect on their high school mentored research experience. *Roeper Review*, 19, 204-207.

This study was based on Terman's (1984) claim that every successful person has a mentor. A questionnaire was mailed to 354 former GT students who participated in the Independent Study/Mentorship Program at six high schools during 1989-1994. Ninety students responded and reported the mentorship program was memorable (84% agreed or strongly agreed); affected extracurricular activities and accomplishments (64%); contributed to academic achievements (73%); helped select a particular career (74%); personal view of self (77%); and personal growth and development (64%). The authors conclude, "these programs are a powerful, economically beneficial option for gifted youth...has long lasting effects" (p. 207).

Friedman, R. C., & Lee, S. W. (1996). Differentiating instruction for high-achieving/gifted children in regular classrooms: A field test of three gifted-education models. *Journal for the Education of the Gifted*, 19, 405-436.

This study examined three instructional models: the Enrichment Triad Model (Renzulli & Reis, 1986), the Multiple Talent Model (Taylor, 1986), and the Cognitive-Affective Interaction Model (Williams, 1986). These models were field-tested in inclusive, general-education classrooms in rural, low-income, and/or ethnically diverse communities. The researchers analyzed how certain elements of the model affected the cognitive complexity of the classroom and student involvement. Using a multiple-baseline-across-settings design, the researchers interviewed and observed the participants. They found that a strong positive relationship existed between teacher questions and student responses. The interaction model demonstrated the greatest gains in student higher cognitive skill levels.

Gentry, M., & Owen, S. V. (1999). An investigation of the effects of total school flexible cluster grouping on identification, achievement, and classroom practices. *Gifted Child Quarterly*, 43, 224-243.

The study examined the use of cluster grouping during a four-year period in a small, rural school district. The treatment sample included all of the students from two graduation class years, n=197. The comparison sample involved students who had not been involved in cluster grouping in a demographically similar school, n=137. The Iowa Test of Basic Skills and the California Achievement Test were used to measure student achievement in both schools. While the students in the treatment schools began with lower reading scores, they outperformed or equaled their comparison group after three years with math scores significantly higher.

Hébert, T. P. (1993). Reflections at graduation: The long-term impact of elementary school experiences in creative productivity. *Roeper Review*, 16, 22-28.

What is the long-term impact of creative productivity experiences in elementary school? Using nine case studies of students who participated in the Renzulli Enrichment Triad Model in grades 4-6, the author conducted in-depth, open-ended, tape-recorded interviews during the spring of their high school senior year. The following themes emerged after analyzing interviews, products, and plans: Type III interests affect post-secondary plans; a desire for creative outlets continues in high school; a decrease in Type III activities in

junior high; earlier Type II activities provide training for later productivity; and non-intellectual characteristics such as creativity and task commitment remain constant.

Hébert, T. P., & Neumeister, K. L. S. (2000). University mentors in the elementary classroom: Supporting the intellectual, motivational, and emotional needs of high-ability students. *Journal for the Education of the Gifted*, 24, 122-148.

Case study and ethnographic research methods were used to examine how a fourth-grade teacher implemented a mentoring program and its effect on the students. Data collection included observations, interviews, and document review of 18 successful partnerships between students and university mentors. The program design included teacher preplanning, instructional strategies and flexibility. Mentors met with their students twice a week for two to four hours. The program met the goal of meeting differentiated needs of the students and created opportunities for new relationships between the university mentors and the teachers' students.

Maker, C. J., & Schiever, S. W. (2005). *Teaching models in education of the gifted* (3<sup>rd</sup> ed.). Austin, TX: PRO-ED.

This book reviews teaching-learning models that can be used in the development and implementation of a curriculum for gifted students. The book examines the changes in models and provides examples of the use of different models with gifted students of various ages.

Olszewski-Kubilius, P. (1998). Research evidence regarding the validity and effects of talent search educational programs. *The Journal of Secondary Gifted Education*, 9, 134-138.

This literature review examined the validity of talent search protocols and predictive validity of talent search scores. Middle school students who make college-entry level SAT scores are able to master advanced content without any detriment to long-term retention or subsequent courses. These students perform better in high school, college, and graduate school than students whose scores are in the bottom quarter. Students in talent search programs took more college classes in high school, with girls keeping up with the boys. They were more likely to attend a selective undergraduate institution, enter college earlier, and go to graduate school.

Moon, S. M., Feldhusen, J. F., & Dillon, D. R. (1994). Long-term effects of an enrichment program based on the Purdue Three-Stage Model. *Gifted Child Quarterly*, 38, 38-48.

The 23 students in this study participated in an elementary program that used the Purdue Three-Stage Model for at least 3 years and were either seniors in high school or were attending college. Along with school data, participants and parents responded to a questionnaire. The enrichment program had a positive impact on the students and was successful in achieving program goals. Contrary to research, students did transfer some of the creative thinking and problem solving skills to content-specific subjects. Since students did not appear to enjoy assigned independent projects, the authors conclude that student-generated studies around their interests may be more effective.

Olszewski-Kubilius, P. (1998). Research evidence regarding the validity and effects of talent search educational programs. *The Journal of Secondary Gifted Education*, 9, 134-138.

This literature review examined the validity of talent search protocols and predictive validity of talent search scores. Middle school students who make college-entry level SAT scores are able to master advanced content without any detriment to long-term retention or subsequent courses. These students perform better in high school, college, and graduate school than students whose scores are in the bottom quarter. Students in talent search programs took more college classes in high school, with girls keeping up with the boys. They were more likely to attend a selective undergraduate institution, enter college earlier, and go to graduate school.

Rash, P. K., & Miller, A. D. (2000). A survey of practices of teachers of the gifted. *Roeper Review*, 22, 192-194.

Researchers surveyed 135 gifted teachers in Idaho and received 62 responses (46%). Teachers spent their days (in descending order of time) teaching accelerated subjects, preparing lessons, writing instructional units, individual student assessment for program placement, special meetings, working on a co-teaching assignment, counseling gifted children, school duties, working with parents, student assessment for program

placement, and presenting workshops. Programs used included Creative Problem Solving, Junior Great Books, and Talents Unlimited. Teaching models included Bloom's Taxonomy, Renzulli's Enrichment Triad, Creative Problem Solving, and Talents Unlimited. More experienced and educated teachers were more likely to implement a greater variety of curricular models.

Reis, S. M., Westberg, K. L., Kulikowich, J. M., & Purcell, J. H. (1998). Curriculum compacting and achievement test scores: What does the research say? *Gifted Child Quarterly, 42*, 123-129.

This study examined the effects of curriculum compacting on achievement test scores of over 300 American gifted elementary students. Teachers from 3 treatment and 3 control groups used curriculum compacting to replace mastered material with more appropriate learning activities. The Classroom Practices Questionnaire and the Compactor Form assessed teachers' practices. Pre and post student achievement was assessed by the Iowa Test of Basic Skills. While no significant differences were found in student performance on the ITBS between experimental and control groups, the authors noted that the scores did not decline even when 40 to 50% of the content was compacted.

Renzulli, J. S. (Ed.) (1986). *Systems and models for developing programs for the gifted and talented*. Mansfield Center, CT: Creative Learning Press.

This book describes a variety of models for designing programs in gifted education. Some of the models discussed include Renzulli and Reis' enrichment triad/revolving door model, Treffinger's independent learning through individualized programming model, Williams' cognitive-affective model for enriching gifted programs, Taylor's multiple creative talents and knowledge, Meeker and Meeker's Structure of the Intellect system, and Schlichter's talents unlimited model.

Schack, G. D. (1993). Effects of a creative problem-solving curriculum on students of varying ability levels. *Gifted Child Quarterly, 37*, 32-28.

This study examined the effects of a creative problem-solving curriculum on students of varying ability. The sample was made of 300 gifted, honors, and average level middle school students from 6 schools. Teachers rated treatment and comparison students' creativity, ability to work in groups, and potential giftedness of all students. Treatment students showed significant gains in problem-solving ability. There were no significant differences among ability levels, which implied that all students might benefit from process skills taught in creative problem solving. Teachers tended to see students as gifted if they were highly successful and learned quickly and easily.

Swiatek, M. A. (1993). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review, 15*, 120-123.

Five cohorts who participated in the Johns Hopkins University Study of Mathematically Precocious Youth were surveyed at the age of 19, some at the age of 23, and some at the age of 33. Students who choose to accelerate in high school do not suffer academically but gain speed in their educational preparation. These students perform well at advanced levels of study, complete college, and attend graduate school in numbers that exceed the national average. In addition, the students also express satisfaction with college and their experiences.

## **Standard 1: Foundations**

### **GT1K3**

#### **Local, state/provincial and federal laws and policies related to gifted and talented education.**

#### **Research-based References**

National Association for Gifted Children and Council of State Directors of Programs for the Gifted. (2003). *The 2001-2002 state of the states gifted and talented education report*. Washington, DC: Author.

According to the 2001-2002 State of the States report, 20 states administer gifted programs under Special Education or Exceptional Students divisions with the remainder offering programs under Curriculum and Instruction, General Education, or Gifted and Talented. In 29 states, gifted education is mandated through

one of the following: A state law specific to gifted education (n=14), a law specific to disabilities and gifted education (n=7) or administrative rule (n=6), or state-level policy (n=3). However, only 21 states provide funding for gifted programs. Some states mandate identification and require school divisions to use the state definition of "gifted" or the state rules (n=29), leaving details such as choice of test instruments up to the school districts. Thirteen states do not mandate identification.

Council of State Directors of Programs for the Gifted. (1990). *The 1990 state of the states gifted and talented education report*. Augusta, ME. Maine Department of Education.

The Council of State Directors of Programs for the Gifted used a revised version of the 1987 survey to gather information from 47 state specialists at the respective Departments of Education, the District of Columbia, and the Trust Territories of Guam and Puerto Rico. Survey results indicated that 26 states mandate services for GT students. Forty states fund local education programs with state dollars as opposed to federal money. Only 10 states reported that GT programs followed the same policies as education for individuals with disabilities; 21 reported due process rights. Thirty-two local programs are monitored by the state.

Gallagher, J. J., Weiss, P., Oglesby, K., & Thomas, T. (1983). *The status of gifted/talented education*. United States Surveys of Needs, Practices, and Policies. Chapel Hill, NC: Gifted Education Policy Studies Program.

The authors surveyed over 1,200 people about attitudes toward gifted education. The major issue for parents was special programs (35%); for teachers, in-service training (22%); and for administrators, funding (21%). Over 50% of respondents preferred the state as a catalyst for providing funds for leadership training, research, curriculum, and dissemination. A second survey of state directors indicated similarities in definitions with states including intellectual (43%), academic (39%), creative (36%), leadership (30%), and visual-performing arts (33%). Most states provide some type of local assistance. A third survey of local program directors indicates use of special class, teacher consultant, and resource room models.

Karnes, F. A., Stephens, K. R., & Whorton, J. E. (2000). Certification and specialized competencies for teachers in gifted education programs. *Roeper Review*, 22, 201-202.

This study replicated the Karnes and Whorton (1996) study where state directors of gifted education were asked to provide information regarding the status of certification or endorsement of teachers of the gifted. The survey results indicated that a total of 28 states offer certification for gifted teachers. Some new states now fit into this category whereas other states no longer offer endorsement or certification. The authors again stress the importance of a national standard of gifted teacher competencies.

Karnes, F. A., Troxclair, D. A., & Marquardt, R. G. (1998). Due process in gifted education. *Roeper Review*, 20, 297-301.

All 50 states were surveyed to determine if procedural due process for the gifted was available. Between 1992-1995, seven states had 26 due process hearing officer decisions. Twelve hearings involved issues of appropriate placement and/or programming; 5 focused on program eligibility and/or identification; 2 dealt with compensation; and 7 involved miscellaneous issues. The authors prefer due process hearings because no attorneys are required, formal rules of evidence do not apply, and it is a faster process. In states where due process is not available, it is recommended that people initiate action with their local board of education.

O'Connell, P. (1985). *The state of the states gifted and talented education*. Augusta, ME: Maine Department of Education.

The Council of State Directors of Programs for the Gifted was surveyed. Results indicate that in 21 states the gifted program is within the special education division. The same rules applied to both gifted and special education programs in 9 states with 15 states using the same funds. The definition of giftedness included "intellectual" (44 states), "academic" (42), "creative" (36), "arts" (32), "leadership" (23), with 15 states reporting an IQ cut-off. Twenty-one states report a mandate with funding and 20 states report funding only. Sixteen states required special teacher certification and 26 had provisions for low SES or minority students.

Purcell, J. H. (1995). Gifted education at a crossroads: the program status study. *Gifted Child Quarterly*, 39, 57-65.

Using surveys and interviews with a sample of key personnel in 19 states, the author reported that programs

for gifted students in states with mandates and in good economic health were intact and expanded. Programs in all other groups of states (states with mandates and in poor economic health, states without mandates and in good economic health, states without mandates in poor economic health) were being threatened, reduced, and eliminated.

### Literature/Theory-based References

Baker, B. D., & McIntire, J. (2003). Evaluating state funding for gifted education programs. *Roeper Review*, 25, 173-179.

Five categories of state school funding are described: weighted funding, flat-grant funding, resource-based funding, percentage reimbursement funding, and discretionary grants. Data on current state policies for funding gifted education are from the National Center for Education Statistics. They recommend that state officials and academic researchers collaborate in collecting and analyzing state aid funding and policies for gifted education, evaluating whether objectives are being met, and using this information for policy development.

Ford, D. Y., & Russo, C. J. (1995). Meeting the educational needs of the gifted: A legal imperative. *Roeper Review*, 17, 224-228.

Only one major federal law, the Jacob K. Javits Gifted and Talented Students Act of 1988, acknowledges the need for special programs for gifted children. The law has several shortcomings. It does not mandate the creation of gifted programs and does not include a national policy on gifted education so that standards are continually interpreted. Since there is no federal policy on identification and placement of gifted students, the authors conclude that the lack of a mandate virtually insures that the needs of gifted students largely will go unmet.

Karnes, F. A., & Marquardt, R. G. (1991). *Gifted children and the law*. Scottsdale, AZ: Great Potential Press.

This book provides a survey of federal and state initiatives, the legal process and gifted education, court cases affecting gifted students' educational opportunities and school policies, related legal issues and gifted youth. It also describes mediation and due process procedures.

Karnes, F. A., & Marquardt, R. G. (1997). The fragmented framework of legal protection for the gifted. *Peabody Journal of Education*, 72 (3&4), 166-179.

This article describes the legal framework for the gifted in America. Federal and state legislation, case law, and administrative regulations, due process hearing, letters of finding for the Office for Civil Rights, and mediation create the gifted education legal framework. The current federal law in gifted education does not guarantee a free, appropriate mandated education. Because of this omission, it is left up to individual states to provide policies for the gifted. The states have varied in providing legal protection for the gifted resulting in fragmented gifted education law.

Karnes, F. A., & Marquardt, R. G. (2000). *Gifted children and legal issues: An update*. Scottsdale, AZ: Great Potential Press.

This book provides an update of federal and state initiatives, the legal process and gifted education and court cases affecting gifted students' educational opportunities and school policies. It also describes negotiation, mediation and due process procedures.

Passow, A. H. (1993). National/state policies regarding education of the gifted. In K. A. Heller, F. J. Monks, & A. Harry Passow (Eds.). *International Handbook of Research and Development of Giftedness and Talent* (pp. 29-46). New York: Pergamon.

This chapter summarizes national and international policies and their effects on programs. Along with policies, factors such as the structures and relationships between governmental levels and the provision of resources to schools influence the facilitation of programming for gifted and talented students. In the United States no single model shapes policies, regulations, rules and guidelines, it is unclear which characteristics result in "better", more stable and continuous programs.

### Practice-based References

Hansen, J. B., & Feldhusen, J. F. (1994). Comparison of trained and untrained teachers of gifted students. *Gifted Child Quarterly*, 38, 115-121.

Eighty-two teachers (54 trained in gifted education) participated in this study. Teaching skills were assessed by trained observers using the Teacher Observation Form (TOF). Class climate was measured with the Class Activities Questionnaire (CAQ). Eight observer/raters were used in the study to observe 365 students. Student t-tests were used to compare composite scores for the TOF and the CAQ. Teachers who had been trained in gifted education demonstrated greater teaching skills and developed more positive class climates than teachers with no training. Students of trained teachers reported greater emphasis on higher level thinking skills and discussion.

Karnes, F. A., & Whorton, J. E. (1996). Teacher certification and endorsement in gifted education: A critical need. *Roeper Review*, 19, 54-56.

This study identified states requiring specialized certification or endorsement for GT teachers. The survey was mailed to state directors of gifted education listed as members of the Council of State Directors of Programs for the Gifted. Twenty-seven states offer gifted certification and 23 states reported no specific certification requirements for teachers of gifted and talented students. The authors cite Hansen and Feldhusen's (1994) study that showed significant differences in the effectiveness of teachers in gifted programs that had taken 3-5 graduate courses. Karnes and Whorton call for a national standard of gifted teacher certification.

## Standard 1: Foundations

### GT1K4

**Issues in conceptions definitions, and identification of individuals with gifts and talents, including those of individuals from diverse backgrounds.**

#### Research-based References

Coleman, M. R., & Gallagher, J. J. (1995). *Report on state policies related to the identification of gifted students*. Chapel Hill, NC: Gifted Education Policy Studies Program.

State directors were surveyed about identification procedures of GT students from special populations. Subgroups such as culturally diverse students (40), economically disadvantaged (38), learning disabled/gifted (37), and other handicapping conditions (36) were included in state definitions of special populations. In 43 states there were policies to encourage schools to serve these students. In 39 states, different criteria could be used to identify these students. Seven states used a quota system, and 12 states used trial placement experiences. Twenty states included GT education in special education and allowed for the same due process rights.

Coleman, M. R., & Gallagher, J. J. (1995). State identification policies: Gifted students from special populations. *Roeper Review*, 17, 268-275.

The purpose of this study was to analyze how each state identifies students for gifted programs. The survey was mailed to the heads of the Departments of Education of all 50 states and the District of Columbia. Thirty-four of the states had some type of legislation mandating the identification of gifted students and thirty states had mandated programs for gifted individuals. The second study was the examination of implementation of state policies in three states. Findings reveal that policy implementation cannot be viewed outside of the context of political, economic, and social circumstances.

Fernández, A. T., Gay, L. R., Lucky, L F., Gavilan, M. R. (1998). Teacher perceptions of gifted Hispanic limited English proficient students. *Journal for the Education of the Gifted*, 21, 335-351.

This study examined the relationship between teachers' ethnicities and the way they rated characteristics for gifted Hispanic LEP students versus any GT student. The authors surveyed 373 teachers with 162 Hispanic, 137 White, and 74 African American. Using the Survey on Characteristics of Gifted and Talented Hispanic Students (Marquez et al., 1992) and an adapted form that removed all characteristics that related specifically

to Hispanic students, researchers found similarities and differences in teacher perceptions. The authors conclude that teachers tend to perceive language abilities as important characteristics of giftedness that may have negative implications for gifted Hispanic LEP students.

### Literature/Theory-based References

Bernal, E. M. (1994). *Finding and cultivating minority gifted/talented students*. (ERIC Document Reproduction Service No. ED. 391345).

Bernal presents new understandings about the nature of giftedness. First, it encompasses not just high intelligence but creativity and motivation. Second, giftedness is developmental and may be affected by circumstances. Third, there are different kinds of giftedness that cannot be measured by one psychological test. The goal of gifted education is to find capable learners and produce a gifted adult. Giftedness is not limited to English-speaking people.

Cassidy, J., & Hossler, A. (1992). State and federal definitions of the gifted: An update. *Gifted Child Quarterly*, 15, 46-53.

This article provides an overview of how the federal definition of giftedness has changed since 1969. The Marland 1972 definition was revised to eliminate the psychomotor area as a category of giftedness, added the term "youth", and introduced various categories of giftedness with the term "such as". From survey information conducted in 1985, the authors noted that the federal definition is the common denominator in state definitions.

Castellano, J. A. (1998). *Identifying and assessing gifted and talented bilingual Hispanic students* (Report No. EDO-RC-97-9). Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED. 423104).

This article discusses the ongoing effort to develop new methods for identifying talent and giftedness among bilingual and limited-English-proficient Hispanic students. Castellano suggests use of both qualitative and quantitative instruments. As more culturally and linguistically diverse students enter the nation's schools, local programs must be in place to identify and educate the gifted and talented among them and must allow their participation while they are learning English.

Cattell, R. B. (1963). Theory of fluid and crystallized intelligence: A critical experiment. *Journal of Educational Psychology*, 54, 1-22.

Cattell hypothesized the existence of two kinds of ability: fluid and crystallized. Fluid ability refers to the success in adapting to new situations whereas crystallized ability refers to acquired knowledge. Individual differences in the discrepancy between crystallized and fluid intelligence may result from variations in cultural opportunities and interests. As an individual reaches adulthood, differences in crystallized intelligence continue to grow.

Cohen, L. M. (1990). *Meeting the needs of gifted and talented minority language students*. Reston, VA: Council for Exceptional Children and ERIC Clearinghouse on Handicapped and Gifted Children. (ERIC Document Reproduction Service No. ED. 321485).

Cohen discusses giftedness as it relates to other cultures, values, and learning styles of different ethnic groups. The author suggests multiple assessment measures and assessments of LEP students in their native language while increasing staff awareness of different ways that giftedness may be manifested in different populations.

Coleman, L. J. (2004). Is consensus on a definition in the field possible, desirable, necessary? *Roeper Review*, 27, 10-11.

The author asserts that the field of gifted education has agreed on Marland's definition of giftedness, even though few are content. There are other definitions in the field that search for a more specific definition of giftedness. Renzulli's definition encompasses reforming the general school and implies that giftedness can be fostered. Stanley's definition points toward a stable notion of giftedness and advocates learning of advanced content. The author suggests the creation of domain-specific definitions of giftedness.

Gagné, F. (1985). Giftedness and talent: Reexamining a reexamination of the definitions. *Gifted Child Quarterly*, 29, 103-112.

Gagné reviews the literature regarding the definitions of giftedness and talent. He identifies four major trends: (a) no definite distinction between giftedness and talent, (b) conceptual distinction between intelligence and other abilities, (c) marginal distinctions, and (d) recent models of Renzulli (1979) and Cohn (1981). Foster (1981) integrated Renzulli and Cohn's models. Gagné proposes a new differentiated model of giftedness and talent in which giftedness deals with above-average competence in ability while talent refers to above-average performance. Gagné's model includes intellectual, creative, socio-emotional, sensori-motor, and 'other' as ability domains.

Guilford, J. P. (1967). *The nature of human intelligence*. New York: McGraw Hill.

Guilford describes his theoretical model of intelligence: the structure of intellect. Intellect is defined as information processing and has three dimensions: operations, contents, and products. There are five categories under operations, five under contents, and six under products. Using factor analysis, he determined their existence empirically.

Johnsen, S. K. (Ed.) (2004). *Identifying gifted students: A practical guide*. Waco, TX: Prufrock Press.

This book reviews the definitions, models, and characteristics of gifted and talented students, explains approaches to qualitative and quantitative assessments, discusses important characteristics of selecting instruments, provides technical information for more than 40 assessments that are frequently used in gifted education, examines the identification process, and reviews methods for evaluating the identification procedure.

Marland, S. P. (1972). *Education of the gifted and talented: Report to the Congress of the United States by the U.S. commissioner of education*. Washington, D.C.: U.S. Government Printing Office.

This report defines giftedness in six categories: general intellectual ability, specific aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability.

Passow, A. H., & Frasier, M. M. (1994). Toward improving identification of talent potential among minority and disadvantaged students. *Roepers Review*, 18, 198-202.

This article offers guidelines in identifying giftedness in underserved populations: (a) no single "theory of giftedness" exists; (b) "schoolhouse giftedness" should be nurtured; (c) GT behaviors appear in different forms; (d) talents are culturally imbedded; (e) talents of minority children aren't of a different order nor of a lower standard; (f) identification and cultivation of talent is integrated; (g) sociocultural context should be considered; (h) culture interacts with the environment; (i) resources and segregation have an impact; (j) err on the side of over-inclusion; (k) focus on talent identification and development; (l) examine talent within minority groups; and (m) apply the model to all students.

Renzulli, J. S. (2002). Emerging conceptions of giftedness: Building a bridge to the new century. *Exceptionality*, 10(2), 67-75.

Renzulli describes the definition of giftedness moving from a conservative view to a more liberal one. Instead of measuring giftedness by cognitive performance, a broader range of performance areas is now considered. Renzulli's original three-ring conception of giftedness focused on above-average ability, task commitment, and creativity. Research is needed regarding traits that produce academic and creative giftedness, the interaction of different areas of giftedness, and young people at work in demanding learning situations. Social capital and empathy are emerging areas of interest in defining giftedness.

Simonton, D. K. (2000). Genius and giftedness: Same or different. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.) *International handbook of giftedness and talent* (pp. 111-121). New York: Elsevier.

Simonton discusses the complexities in the process by which potential talent is converted into actual talent. His research asks two important questions: Why do so many gifted children fail to realize their potential upon

becoming adults? Why is it that many highly successful adults managed to display no clear signs of giftedness in their early years? He recommends that a comprehensive theory of talent development must address both of these questions.

Stephens, K. R., & Karnes, F. A. (2000). State definitions for the gifted and talented revisited. *Exceptional Children, 66*, 219-238.

This article provides an overview of the evolution of the federal definition of gifted and talented and results from a national survey to determine each state's definition. Five states have completely eliminated their states' definitions and three states leave the responsibility of defining giftedness to the local school districts. The authors point out the threat of instability and consistency. Factors such as the trend to identify more underrepresented groups and the amount of state funding allotted to services for the gifted may influence definitions of giftedness.

Sternberg, R. J., & Davidson, J. E. (Ed.) (2006). *Conceptions of giftedness*. New York: Cambridge University Press.

The authors describe the major conceptions of gifted and how they apply to identification, instruction, and the assessment of gifted students. Represented conceptions include Brody and Stanley, Callahan and Miller, Cross and Coleman, Feldhusen, Gagné, Reis, Renzulli, Robinson, Runco, Simonton, Sternberg, Subotnik and Jarvin, VanTassel-Baska, Winner, Wahlberg and Paik.

U.S. Department of Education. (1993). *National excellence: A case for developing America's talent*. Washington, D.C.: U.S. Government Printing Office.

The federal Javits Gifted and Talented Students Education Act provided a general definition of giftedness as children with outstanding talent. "Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools." (p. 26)

U.S. Congress, Public Law 91-230, April 1970.

The Educational Amendments of 1969 contained one of the first federal definitions of giftedness: "The term 'gifted and talented children' means in accordance with objective criteria prescribed by the Commissioner, children who have outstanding intellectual ability or creative talent, the development of which requires special activities or services not ordinarily provided by local education agencies." This was later revised and broadened by Sidney Marland (1972).

### **Practice-based References**

Borland, J. H., & Wright, L. (1994). Identifying young, potentially gifted, economically disadvantaged students. *Gifted Child Quarterly, 38*, 164-171.

This article describes Project Synergy, a procedure for identifying economically disadvantaged, potentially gifted kindergarten students in urban schools. The approach emphasized the development of site-appropriate methods such as multicultural curriculum-based enrichment activities, classroom observations, portfolio assessment, teacher nominations, dynamic assessment, a literature-based activity, a child interview, and the concept of best performance. It de-emphasized the use of standardized tests.

Johnsen, S., & Ryser, G. (1994). Identification of young gifted children from lower income families. *Gifted and Talented International, 9*(2), 62-68.

This study examined the relationship among measures used in the identification for a summer program of 50 gifted and talented four to seven-year-old children from lower income families. Approximately 38% were Hispanic. Identification procedures included parent nomination, teacher nomination, products, the Torrance Test of Creative Thinking, the Screening Assessment for Gifted Elementary Students—Primary Version. The three best predictors of future achievement were the SAGES-P Reasoning, the parent checklist, and the

teacher checklist.

Jatko, B. P. (1995). Action research and practical inquiry: Using a whole class tryout procedure for identifying economically disadvantaged students in three socioeconomically diverse schools. *Journal for the Education of the Gifted*, 19, 83-105.

This author conducted research addressing the identification and selection of economically disadvantaged gifted students for participation in the TAG Future Problem Solving program. An action research, whole-classroom approach was used to evaluate fourth grade students at three elementary schools (1 affluent community, 1 lower-middle income, and 1 extremely low income) who had no previous experience with the FPS program. The author states that this technique can be an effective tool for educators in increasing the number of economically disadvantaged children in a TAG program, but ultimately, the students are the major beneficiaries of the services.

Kitano, M. K., & Espinosa, R. (1995). Language diversity and giftedness: Working with gifted English language learners. *Journal for the Education of the Gifted*, 18, 234-254.

This article summarizes research on language diversity and giftedness, recommending new strategies for identification: a developmental program that “evokes” a gifted student’s potential; a broader conceptualization of intelligence; alternative constructs of giftedness; and assessment models developed for specific populations. In addition, English language learners tend to profit from primary language instruction during the early grades followed by a two-way bilingual program for upper level elementary gifted students. Recommended instructional strategies include student-centered approaches, emphasis on language development, valuing of students’ languages in strong content courses, and collaborative learning. Family and community involvement must recognize cultural strengths and respect family resources.

Smith, J., LeRose, B., & Clasen, R. E. (1991). Underrepresentation of minority students in gifted programs: Yes! It matters! *Gifted Child Quarterly*, 35, 81-83.

This article describes the Lighthouse Project in Racine Unified School District. The top-scoring 9% of each major ethnic group were identified before kindergarten as gifted and randomly assigned to either a gifted treatment or regular program. Twelve years later, not one of the 24 minority students who were included in the gifted program dropped out. Of the 67 equally able minority students who were not included, 45% dropped out. Approximately 75% of students in the gifted program planned to go to college. The authors conclude that if more minorities had been admitted, more would have graduated and planned for higher education.

VanTassel-Baska, J., Johnson, D., & Avery, L. D. (2002). Using performance tasks in the identification of economically disadvantaged and minority gifted learners: Findings from Project STAR. *Gifted Child Quarterly*, 46, 110-123.

A pool of performance task assessments and accompanying rubrics with 6 items per grade cluster were generated for primary (grades 2-3) and intermediate levels (grades 4-5). Project STAR instruments were used with 1,792 students across 28 districts. Twenty-eight percent of students met the criterion cutoff of 80% or higher on either the verbal or the nonverbal component. Of these 518 students, 60 were African American (11.6%) and 77 students (14.9%) were economically disadvantaged. The authors conclude that carefully constructed and tested performance assessments or lowering the screening criterion to the 90<sup>th</sup> percentile in reading or math can locate underrepresented populations.

Woods, S. B., & Achey, V. H. (1990). Successful identification of gifted racial/ethnic group students without changing classification requirements. *Roepers Review*, 13, 1-26.

The Academically Gifted Project in Greensboro, North Carolina, sought to increase racial/ethnic group representation in an elementary school's Academically Gifted Program by enhancing referral and evaluation procedures rather than lowering or changing requirements for identification. This article describes the project's development, procedures used, results of three years of operation, and success factors. The instruments used include the KABC and WISC-R and teacher evaluations were also used. The results indicated that standardized tests were not biased, but teachers’ lack of information about gifted along with the parents’ lack of awareness were major factors in the giftedness identification process.

## Standard 1: Foundations

### GT1K5

#### Impact of the dominant culture's role in shaping schools and the differences in values, languages, and customs between school and home.

##### Research-based References

Cornell, D. G., Delcourt, M. A. B., Goldberg, M. D., & Bland, L. C. (1995). Achievement and self-concept of minority students in elementary school gifted programs. *Journal for the Education of the Gifted, 18*, 189-209.

This study reports on the standardized achievement scores and self-concept levels of African-American, Hispanic, and White elementary school students placed in gifted or regular school programs. The sample consisted of 946 second and third grade students (595 white, 299 African-American, 52 Hispanic). Results indicated that minority students who were identified for gifted programs scored significantly higher on achievement measures than minority students placed in regular classrooms. There were no differences in academic or social self-concept.

Diaz, E. I. (1998). Perceived factors influencing the academic underachievement of talented students of Puerto Rican descent. *Gifted Child Quarterly 42*, 105-122.

This qualitative investigation explored the self and environmental perceptions of six talented students of Puerto Rican descent who were underachieving in an urban high school in the northeastern section of the United States. Four factors were identified as influencing underachievement: family (strained relationships, unhappy home, inappropriate parental expectations, minimal academic guidance, inconsistency), school (inappropriate early curricula experiences, non-inspiring teachers, unrewarding curriculum, questionable counseling), community (hostile environment, gangs, prejudice, few constructive entertainment options), and personal (insufficient perseverance, low self efficacy, inappropriate coping strategies). The absence of early appropriate academic experiences appeared to be a major factor in the students' future success.

Ford, D. Y., & Harris III, J. (1997). A study of the racial identity and achievement of Black males and females. *Roeper Review, 20*, 105-110.

This study examined the racial identity and achievement of 152 Black males and females. Sixty-two students were underachieving with the greatest percentage being male. Students were administered the Racial Identity Scale for Black Students. Underachievers had less positive racial identities than achieving students. The authors conclude that counseling strategies may have to focus on helping some Black students cope with the difficulties inherent in attending gifted programs that are often predominantly white—negative peer pressures, poor peer relations, feelings of isolation, and sensitivity about feeling different.

Grantham, T., & Ford, D. (1998). A case study of the social needs of Danisha: An underachieving gifted African-American female. *Roeper Review, 21*, 96-101.

The purpose of this case study of a 15-year-old underachieving gifted African-American female was to identify social and emotional needs of gifted students. Data were collected through interviews, field observations, and school files. The authors found that Danisha struggled to accept Caucasian students' social norms and felt isolated in her gifted and talented classes. She wanted to integrate into the gifted classes, yet she didn't want to forfeit her relations with her African-American friends. They suggested that counseling needed to focus on issues related to racial identity; teachers needed multicultural training; and coordinators needed to identify more minority students in classes.

Hébert, T. P. (1998b). Gifted Black males in an urban high school: Factors that influence achievement and underachievement. *Journal for the Education of the Gifted, 21*, 385-414.

The case studies reported in this article describe the experiences of two gifted African American males in an urban high school. Factors that influenced achievement appeared to be belief in self, family support, multicultural appreciation, sensitivity, and high aspirations. Factors that influenced underachievement

appeared to be an inappropriate match with the curricular activities and learning style, inappropriate counseling and class placement, and inconsistent family role models. The authors suggest the importance of training counselors for diversity, working closely with families, and providing enrichment activities outside the school days.

### Literature/Theory-based References

Castellano, J. A., & Diaz, E. I. (Eds.)(2002), *Reaching new horizons: Gifted and talented education for culturally and linguistically diverse students*. Boston: Allyn & Bacon.

Culturally and linguistically diverse students have differing backgrounds of degree of acculturation, social support, and English language proficiency levels. "However, because these factors differ from the traditional pattern of the dominant culture, traditional identification procedures will most likely be ineffective for discovering gifted ability" (p. 201). Stereotypes can negatively impact educators' attitudes towards minority students whereas teacher's cultural sensitivity, the quality of instruction, and preparation to foster a learning environment can make a difference. Children exposed to early nurturing and stimulating environments have a greater chance of developing high levels of intelligence.

Gibson, M.A., Gandara, P., & Koyama, J.P. (2004). *School Connections*. Teachers College Press: New York.

Effects of differences in values, languages, and customs between school and home include a greater dependence of minority students on peers, sense of belonging at school, pressure to contribute to household income. Even positive peer influence cannot overcome school climates that do not value Mexican-descent students' unique cultural assets and experiences within and outside of the academic realm (p. 126). Social capital of students' peer groups proved to be an important indicator of academic success. Academically successful students of color were often adept border crossers, demonstrating the ability to form connections with peers of different racial and socioeconomic backgrounds.

Ogbu, J. U. (1994). Understanding cultural diversity and learning. *Journal for the Education of the Gifted*, 17, 355-383.

This article argues that core curriculum and multicultural education do not adequately address the problem of minority groups who have not traditionally done well in public schools. The crucial issue is the degree of diversity between minority and American mainstream cultures. Minority students may resist academic success because of their fear of "acting White." The author recommends that students be taught attitudes and behaviors that lead to academic success apart from attitudes that lead to a loss of ethnic identity. Families should value academic success as much as achievement in sports and entertainment and encourage responsibility for one's own learning.

Rumberger, R. W., & Larson, K. A. (1998). Toward explaining differences in educational achievement among Mexican American language-minority students. *Sociology of Education*, 71(1), 68-92.

A minority student's language proficiency in both the heritage language and English affect their access to social capital and therefore information and resources to options that can influence their life in a positive way. Highly bilingual students had higher grades due to larger information networks and ties to school personnel.

Stanton-Salazar, R. D., & Spina, S. U. (2000). The network orientations of highly resilient urban minority youth: A network-analytic account of minority socialization and its educational implications. *Urban Review*, 32, 227-261.

Successful management of differences in cultures and values between school and home comes from learning to manage life in multiple worlds by publicly dramatizing the ideals of self-reliance and independence while privately making strategic use of resources in their social network. Students, who don't have this "adaptive" skill, reject various social worlds, are put on the defensive and do not develop as well socially.

Weinstein, R. S., Gregory, A., & Strambler, M. J. (2004). Intractable self-fulfilling prophecies: Brown v. Board of Education. *American Psychologist*, 59, 511-520.

The authors assert that society has focused on selecting rather than developing talent. Ability grouping, advanced placement, and honors classes alter the educational pathways of students in their learning

opportunities and peer networks. Social prejudices and low expectations of teachers affect the students' own beliefs about their abilities. Previous studies show negative self-fulfilling prophecies have a greater impact on minority students. The authors call for an equitable culture for learning that understands the "malleable and diverse nature of human capacity" and the provision of learning environments that nurture development of each student.

### Practice-based References

Herr, K., & Anderson, G. L. (2003). Violent youth of violent schools? A critical incident analysis of symbolic violence. *International Journal of Leadership in Education*, 6, 415-433.

The authors present ideas from *Reproduction in Education, Society and Culture* (1990), regarding forms of symbolic violence such as the "subtle ways that dominant groups in society make their own particular form of cultural capital appear to be the natural way of being in the world." Students' whose own cultural capital is not valued may escape symbolic violence by finding low-wage jobs or dropping out of school. The most effective teachers with low-income students had an open class atmosphere where students realized that high school and success were possibilities within their reach.

Tomlinson, C. A., Callahan, C.M., & Lelli, K. M. (1997). Challenging expectations: Case studies of high-potential, culturally diverse young children. *Gifted Child Quarterly*, 41, 5-17.

Data from eight case studies of primary age children who participated in START (Support to Affirm Rising Talent) were reported in this study. These children were previously identified using procedures based upon Howard Gardner's multiple intelligences theory. Teachers nominated four of the children as "successful" and four as "unsuccessful." A child was more likely to be judged successful if they demonstrated outstanding ability in traditional core subject areas and did not exhibit behavior problems. In three cases, there were conflicting teacher judgments. In these cases, judgment was more a product of teacher differences than changes in the children.

Uresti, R., Goertz, J., & Bernal, E. M. (2002). Maximizing achievement for potentially gifted and talented and regular minority students in a primary classroom. *Roeper Review*, 25, 27-31.

This proactive case study examined the implementation of the Autonomous Learner Model by a first grade ESL teacher. Initially the teacher had the students experience group problem solving activities. Each student also completed a learning style inventory and kept a daily journal. The teacher then set up individual interviews to assist each child in choosing a topic for individual enrichment. After collecting information, each of the students set up centers and presented their findings to an identified audience. Given the composition of the classroom, the students scored surprisingly well on the ITBS—in the average to above average range.

## Standard 1: Foundations

### GT1K6

**Societal, cultural, and economic factors, including anti-intellectualism and equity vs. excellence, enhancing or inhibiting the development of gifts and talents.**

### Research-based References

Ford, D. Y. (1992). Support for the achievement ideology and determinants of under achievements as perceived by gifted, above average, and average black students. *Journal for the Education of the Gifted*, 16, 280-298.

This study was designed to assess perceptions held by African American students regarding social, cultural, and psychological determinants of underachievement motivation. Seventy-five African American 5th grade students and 73 African American 6th grade students participated as subjects. There were 48 gifted students, 50 above-average, and 50 regular students. The research instrument contained three scales for social, cultural, and psychological characteristics. Subscales measured the ideology and underachievement levels. Gifted students were more optimistic and supportive of achievement ideology. All considered school important. However, there were discrepancies between self-reported levels of effort in school and the

importance students placed on school.

Harmon, D. (2002). They won't teach me: The voices of gifted African American inner-city students. *Roeper Review*, 24, 68-75.

This study examined the effects of bussing from a lower income, minority elementary school to a middle, upper income, majority school. Bussed African American students were angry, received rejection from white peers, and mostly stayed with their minority group. In their other school, they felt more comfortable and did not experience harassment. They viewed ineffective teachers as having low expectations, lacking understanding, and providing unfair and unequal treatment. Three effective teachers were interviewed and spent considerable time developing activities and lessons that presented knowledge from multiple perspectives, required respect in their classrooms, and provided community role models.

### Literature/Theory-based References

Castellano, J. A., & Diaz, E. I. (Eds.) (2002). *Reaching new horizons: Gifted and talented education for culturally and linguistically diverse students*. Boston: Allyn & Bacon.

Poverty is associated with many complex social status and family-structure factors, which may place language-minority children at risk of presenting themselves as low achievers. Levels of stress and distress, number of children, and presence of mental and health problems tend to be much higher in poor families than in their middle and upper class counterparts.

Clark, B. (1997). Social ideologies and gifted education in today's schools. *Peabody Journal of Education*, 72(3&4), 81-100.

Clark claims lack of public support is due to lack of factual information regarding the identity of GT children. Unsupportive ideas include: intelligence is inherited; equity preferred over excellence; GT programs promote elitism; and all children are gifted. Educators' limiting beliefs are: giftedness can be measured by intelligence and achievement tests; what is good for the gifted is good for everyone; GT students should be able to find something to do; accelerated schools make GT programs unnecessary; and all should be in a regular classroom. The best way to change limiting societal ideologies is to disseminate the current knowledge base.

Ford, D. Y. (2003). Desegregating gifted education: Seeking equity for culturally diverse students. In J. Borland (Ed.). *Rethinking gifted education* (pp. 143-158). NY: Teachers College Press.

Ford discusses barriers to equity in gifted education such as ethnocentric perspectives of intelligence and ability, schools that limit talent development, and standardized tests. She suggests that equal opportunities need to be created in curriculum and instruction, pedagogical responsiveness, multicultural education, defensible assessment practices, self-assessment and evaluation, and schools as places of talent development.

Gallagher, J. J. (1991). Educational reform, values, and gifted students. *Gifted Child Quarterly*, 35, 12-19.

Gallagher discusses the current education reforms and how each might be effective in the education of gifted students. These reforms include the excellence movement, cooperative learning, the middle school, the master teacher, site-based management, and accountability. He suggests that educators of gifted students need to be proactive in informing educators and parents about how these reforms might be shaped for the benefit of all students.

Gallagher, J. J. (2004). No child left behind and gifted education. *Roeper Review*, 26, 121-123.

Gallagher examines the issue of equity as proposed with the No Child Left Behind Act versus excellence and gifted programs. School administrators and teachers risk jobs and funding if each child does not make progress (equity). Gallagher reminds us that excellence, not only equity, is a legitimate goal of American schools.

Kitano, M. K. (2003). What's missing in gifted education reform. . In J. Borland (Ed.). *Rethinking gifted education* (pp. 143-158). NY: Teachers College Press.

Kitano suggests that professionals must confront problems that contribute to inequity in educational outcomes. These include overt and subtle discrimination in identification, instruction, and the world of work.

Potential solutions include constructivist approaches with scaffolding and direct instructional support to eliminate individual and institutional bias.

Lovecky, D. V. (1997). Identity development in gifted children: Moral sensitivity. *Roeper Review*, 20, 90-94.

Gifted children show advanced moral development compared to others of their age. However, this development can be influenced by external influences. The need to be accepted by peers will cause students to incorporate others' opinions as their own. The author asserts that gifted children need guidance regarding how and when to take unpopular stands against peer pressure.

Ross, P. O. (1993). *National excellence: A case for developing America's talent*. Washington, DC: U.S. Government Printing Office.

This report describes the challenges that gifted education faces in a society that tends to value brawn and beauty over brains and equity over excellence. A new definition for gifted education emerges that focuses on the importance of talent development.

Stormont, M., Stebbins, M. S., & Holliday, G. (2001). Characteristics and educational support needs of underrepresented gifted adolescents. *Psychology in the Schools*, 38, 413-423.

Three groups of underrepresented gifted populations are young women, adolescents with learning disabilities, and youth who live in poverty. Societal biases and pressures and/or lack of resources such as poverty make these students at-risk for being overlooked. These students need assistance in career exploration, planning, and support for aspirations.

### Practice-based References

Olszewski-Kubilius, P., & Laubscher, L. (1996). The impact of a college-counseling program on economically disadvantaged gifted students and their subsequent college adjustment. *Roeper Review*, 18, 202-208.

Fifty-five urban high school students were compared to a group of economically advantaged students who participated in a special summer program. Most of the students were Black or Hispanic (61%). The lower SES students changed their plans to finance college as a result of the program. Researchers found in the pre-college phase, economically advantaged and disadvantaged gifted students differ only slightly in their aspirations, dreams, expectations and perceptions about college. However, in college, lower SES students were more likely to have been employed as freshman, and perceived a declining level of support from teachers and a lonely feeling on campus.

## Standard 1: Foundations

### GT1K7

**Key issues and trends, including diversity and inclusion, that connect general, special, and gifted and talented education.**

### Research-based References

Larsen, M.D., Griffin, N.S., & Larsen, L.M. (1994). Public opinion regarding support for special programs for gifted children. *Journal for the Education of the Gifted*, 17, 131-142.

This study examined the public debate regarding the devotion of resources and development of GT services in public schools. A telephone survey of 1,000 adults consisted of 844 were parents of school-aged children and 297 were parents of children identified as gifted and talented. There was support for GT programs, especially when the quality of regular classroom education is not reduced. One-sixth supported more funding for special GT programs. Over 60% wanted the schools to do more for GT students and not only spend more. The authors encourage local and state legislation to differentiate more programs for all students.

Purcell, J. H., & Leppien, J. H. (1998). Building bridges between general practitioners and educators of the

gifted: A study of collaboration. *Gifted Child Quarterly*, 42, 172-181.

This survey study examined the incidence of collaboration among 289 enrichment specialists, classroom teachers, and administrators. For the enrichment specialists, 82% indicated that collaboration was used to personalize curricula for high achieving students; 80% of classroom teachers reported that they used collaboration, and 88% of administrators perceived that the strategy was used by practitioners to meet learning needs. Mostly teachers initiated the collaboration to discuss individual students and 70% of enrichment teachers reporting initiating the process, which was a similar report from general practitioners and administrators. Classroom teachers expected enrichment specialists to possess resourcefulness and communication skills.

### Literature/Theory-based References

The College Board. (1999). *Reaching the top: A report of the National Task Force on minority high achievement*. New York, NY: College Board Publications.

The College Board launched the National Task Force on Minority High Achievement in 1997. The primary mission of this Task Force has been to develop recommendations for how segments of U.S. society can work to increase the number of underrepresented minority students who achieve at high levels academically. This report contains Task Force recommendations for action, along with a review of what has been learned over the years about why differences in educational outcomes persist among racial and ethnic groups in the United States. The Task Force has concluded that, if the number of top African American, Latino, and Native American students is to grow rapidly promoting their achievement must become a priority at all levels of the educational system. Colleges and universities, along with state education systems, should create information systems designed to monitor progress and help inform efforts to design more effective strategies. At the K-12 level, the Task Force recommends that local, state, and federal leaders place the goal of increasing the number of top minority students high on the school reform agenda. The Task Force also recommends increased access to high-quality preschool and parent education programs and improved supplemental programs targeting minority students. The Task Force is calling for a policy of affirmative development across many sectors of society. (ERIC abstract).

Gallagher, J. (1997). Least restrictive environment and gifted students. *Peabody Journal of Education*, 72, 153-165.

Explains the concept of least restrictive environment (LRE) and explores the ways in which it fits and does not fit gifted education. The paper discusses LRE as it relates to special education and to gifted students, investigates whether separate education hurts gifted students, discusses gifted students and the equitable society, and looks at the future educational environment for gifted students.

Pfeffier, S. I. (2003). Challenges and opportunities for students who are gifted: What the experts say. *Gifted Child Quarterly*, 47, 161-169.

In identifying the most pertinent issues in the gifted field, 84 gifted experts suggested that the gifted field is undergoing rapid change caused by dramatic shifts in ideological, politics, economics, culture, and technological advances. The inclusion movement has raised questions about the need for special programs and the value of ability grouping.

Rogers, K. B. (2001). *Re-forming gifted education: Matching the program to the child*. Scottsdale, AZ: Great Potential Press.

Rogers describes a variety of program provisions in this book and compares the essentials for students with gifts or talents and the essentials for all students. Her comparisons provide the teacher with information for developing educational plans for all students.

Russo, C. J., & Ford, D. Y. (1993). The educational rights of gifted students: Lost in the legal shuffle? *Roeper Review*, 16, 67-71.

This article provides an overview of the legal rights of gifted children. The authors call for a proactive approach to gifted educational funding. Inadequate funding and insufficient programs are causing poor academic achievement, increased dropout rates, and failure to reach one's potential. A federal mandate may

not guarantee acceptable gifted programs, but it is better than having none.

Treffinger, D. J. (1991). School reform and gifted education--opportunities and issues. *Gifted Child Quarterly*, 35, 6-11.

This is an excellent "how to" article for gifted and talented advocacy, with many lists, bulleted points, and diagrams which advocate for the inclusion of gifted and talented education in school reform. The author discussed implications of studies of excellence for gifted and regular education, and included a teacher checklist and self-study questions for excellence in a classroom climate. School reform and school improvement implications are listed and discussed as a "powerful platform of opportunity for gifted education" (p. 11).

VanTassel-Baska, J. (1998). The development of academic talent. *Phi Delta Kappan*, 79, 760-763.

The author writes that there has been a recent shift towards an emphasis on talent development in gifted education. However, VanTassel calls for talent development at all levels of education. Instead of focusing on minimum standards, education would strive to promote the optimal development of each student.

Whitmore, J. A., & Maker, C. J. (1985). *Intellectual giftedness in disabled persons*. Rockville, MD: Aspen.

This book provides cases studies of gifted persons with disabilities. The authors describe the affective and intellectual needs of gifted persons with disabilities and the need for cooperative programming between special education, gifted education, and general education. The program should provide intellectual challenge, flexibility and consistency, support services, a curriculum that balances strengths and weaknesses, experiences for cognitive development, and a creative problem solving approach.

### **Practice-based References**

Davalos, R., & Griffin, G. (1999). The impact of teachers' individualized practices on gifted students in rural, heterogeneous classrooms. *Roeper Review*, 21(4), 308-314.

In this study, researchers observed teachers training to individualize instruction and the effects on the students. Results indicated that GT students might be served in a classroom of students with varying abilities if the classroom teacher (a) understands the benefits of individualized education and is highly motivated to use it as an instructional technique; (b) is willing to give control over learning to the students themselves; (c) understands and supports academic, social, and emotional needs of GT learners; (d) receives proper training in individualization techniques; and (e) facilitates the development of a shared language of learning among students and instructors.

Landrum, M. (2001). An evaluation of the catalyst program: Consultation and collaboration in gifted education. *Gifted Child Quarterly*, 45, 139-151.

This article evaluates the catalyst program, a resource consultation and collaboration program in gifted education. The sample included 6 GT teachers, 2 itinerant GT teachers, 23 general education teachers, 39 GT students, and 53 nongifted students in grades 3-6. Data included academic performance, teacher observations, consultation activity reports, and field notes. After the program, both groups of students improved their performance on the Ross Test of Higher Cognitive Processes and increased use of independent study and differentiation strategies. Consultative and collaborative activities included coplanning, coteaching, linking gifted and general education curricula, sharing responsibility for student assessment, and sharing educational resources.

Reis, S. M., Gentry, M., & Maxfield, L. R. (1998). The application of enrichment clusters to teachers' classroom practices. *Journal for the Education of the Gifted*, 21, 310-334.

This study investigated the effects of providing enrichment clusters to two urban elementary schools. Enrichment clusters provided a scheduled time for a nongraded group of students to complete a product and work with facilitators skilled in a shared interest area. Data were collected through written descriptions of observations, interviews, evaluations, and questionnaires. Challenging content was integrated using specific authentic methodologies, advanced vocabulary, authentic "tools," advanced resources and reference materials, advanced thinking and problem-solving, integration of creative thinking and historical perspectives,

and presentation or performance development. Approximately 60% of the teachers who facilitated clusters used similar strategies in their regular classroom.

## Standard 2: Development and Characteristics of Learners

Educators of the gifted know and demonstrate respect for their students as unique human beings. They understand variations in characteristics and development between and among individuals with and without exceptional learning needs and capacities. Educators of the gifted can express how different characteristics interact with the domains of human development and use this knowledge to describe the varying abilities and behaviors of individuals with gifts and talents. Educators of the gifted also understand how families and communities contribute to the development of individuals with gifts and talents.

### GT2K1

**Cognitive and affective characteristics of individuals with gifts and talents, including those from diverse backgrounds, in intellectual, academic, creative, leadership, and artistic domains.**

#### Research-based References

Benbow, C. P., & Lubinski, D. (1993). Psychological profiles of the mathematically talented: Some sex differences and evidence supporting their biological basis. In G. R. Bock & K. A. Ackrill (Eds.), *The origins and development of high ability* (pp. 44-66). Chichester: Wiley.

Findings from more than 20 years' research show that males had higher scores on the math and spatial-mechanical reasoning sections, and higher problem-solving of the College Board Scholastic Aptitude Test (SAT). Girls had higher scores in mental arithmetic and computation but were much less likely to study higher-level math. "Sex differences in science achievement should be especially pronounced at the exceptional levels (p. 55)" and "mathematical talent seems to have biological co-variates, with the patterns of brain activation and inhibition underlying precocity and its expression differing between at least a subset of males and females" (p. 57).

Freeman, K. A., & Walberg, H. J. (1999). Childhood traits and conditions of eminent African American women. *Journal for the Education of the Gifted*, 22, 402-419.

The researchers analyzed biographies of 256 eminent women who lived between the years of 1863-1974. The 20 African American women were inspired through a variety of events and were prominent in more than one field. They shared traits similar to other eminent women that included independence, competence, and confidence. They were significantly more persevering, single-minded, apt to take joy in their work, independent, alert to novelty, and religious than other eminent women were. Joy in their work was founded on early accomplishments that were supported by parents, teachers, and others. The authors conclude that educators should focus on nurturing these traits.

Piechowski, M. M. (1998). The self victorious: Personal strengths, chance, and co-incidence. *Roeper Review*, 20, 191-198.

Models of talent development and outstanding achievement emphasize as one of the necessary conditions a strongly supportive environment. Historic and contemporary cases are presented as exceptions to this rule. Examination of these cases shows that personal strengths of the individual are the key factor in overcoming deficiencies in environmental support. This makes the self the centerpiece of the scenario of talent development. Of the four models examined here, Feldman's and Piirto's give more weight to the whole individual than do Tannenbaum's and Gagné's. Attributes of the self-will, entelechy, striving for autonomy and self-realization suggest areas of inquiry in further development of these models (Author's abstract).

Schuler, P. A. (2000). Perfectionism and gifted adolescents. *The Journal of Secondary Gifted Education*, 11(4), 183-196.

This was a multiple-case research design examining perfectionism in gifted rural middle school students. The Goals and Work Habits Survey (Schuler, 1994) was administered to 66 female and 46 male gifted students in grades 7-8. More boys were nonperfectionistic, while more girls were normal perfectionistic. The neurotic

cluster of students contained almost equal numbers of both. Normal perfectionists had a main theme of order and strove for their personal best. Since many gifted perfectionists are model students, educators and parents are surprised when the stress of perfectionism drives students to harmful behavior such as suicide or eating disorders.

Terman, L. M. (1925). *Genetic studies of genius*. Palo Alto, CA: Stanford University Press

This five-volume set focuses on a longitudinal study of 1,528 gifted children who scored above 135 on the Stanford-Binet intelligence test. Terman concluded that gifted students were (a) qualitatively different in school, (b) slightly better physically and emotionally in comparison to normal students, (c) superior in academic subjects in comparison to the average students, (d) emotionally stable, (e) most successful when education and family values were held in high regard by the family, and (f) infinitely variable in combination with the number of traits exhibited by those in the study.

### Literature/Theory-based References

Cattell, R. B. (1971). *Abilities: Their structure, growth and action*. Boston: Houghton Mifflin.

Cattell theorized that intelligence is made up of two factors, crystallized and fluid intelligence. Crystallized intelligence is made up of abilities and knowledge accumulated through education and training. Fluid intelligence is described as general reasoning ability or intuitive reasoning.

Gagné, F. (1985). Giftedness and talent: Reexamining a reexamination of the definitions. *Gifted Child Quarterly*, 29, 103-112.

Gagné proposes a new differentiated model of giftedness and talent in which giftedness deals with above-average competence in ability while talent refers to above-average performance. Gagné's model includes intellectual, creative, socio-emotional, sensori-motor, and 'other' as ability domains.

Gardner, H. (1983/1994). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.

Gardner proposed the broader theory of Multiple Intelligences (MI) that included seven areas of intelligence including linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, and intrapersonal. Later, in 1999, naturalist and existentialist categories were added.

Guilford, J. P. (1967). *The nature of human intelligence*. New York: McGraw-Hill.

Guilford's Structure of Intellect proposed that a person's intelligence is categorized by 150 different components. Operations, contents, and products make up the Structure of Intellect. The 5 types of operations are cognition, memory, divergent production, convergent production, and evaluation. There are 5 kinds of contents, including are visual auditory, symbolic, semantic, and behavioral. The 6 types of products are units, classes, relations, systems, transformations, and implications.

Neihart, M. (1999). The impact of giftedness on psychological well-being: What does the empirical literature say? *Roeper Review*, 22, 10-17.

Previous literature shows two contrasting views of the psychological well-being of gifted children. The first is that gifted children are more vulnerable for adjustment difficulties. The second view is they are better psychologically adjusted due to their cognitive abilities and are better able to cope with stressors, which was advocated by Terman. By the 1980s, many returned to the first view that gifted students were not superior in psychological functioning. Neihart concludes that the gifted are at least as well-adjusted, perhaps better adjusted than the non-gifted, and are not any more at-risk for social or emotional problems.

Piechowski, M. M. (1992). Giftedness for all seasons: Inner peace in time of war. In N. Colangelo, S. G. Assouline, & D. I. Ambrosio (Eds.), *Talent development. Proceedings from the 1991 Henry B. & Jocelyn Wallace National Research Symposium on Talent Development* (pp. 180-203). Unionville, NY: Trillium Press.

Gifted individuals experience life in a different way. Their heightened sensitivities give way to "a different quality of experiencing: vivid, absorbing, penetrating, encompassing, complex, commanding--a way of being

quiveringly alive" (Piechowski, 1992, p. 181).

Spearman, C. (1904). "General intelligence," objectively determined and measured. *American Journal of Psychology*, 15, 201-293.

Spearman introduced a two-factor theory of intelligence that states that there is one single general factor of intelligence (g) with a number of specific factors (s). The 'g' factor can be measured by intelligence tests.

Sternberg, R. J. (2000). Giftedness as developing expertise. In K. A. Heller, F. J. Mönks, & A. Harry Passow (Eds.). *International Handbook of Research and Development of Giftedness and Talent* (pp. 55-66). New York: Pergamon.

Sternberg summarizes the research and presents a model related to the premise that a gifted individual is continually developing a set of valued skills using both the genetic and environmental resources available to him or her (p. 57). He describes characteristics of expertise, which include large schemas, well-organized units of knowledge, greater front-end analysis of problems, sophisticated representations, working forward, choosing strategies based on an elaborated schema, and automatized problem solving strategies.

Torrance, E. P. (1962). *Guiding creative talent*. Englewood Cliffs, NJ: Prentice-Hall Inc.

Torrance writes about the importance of nurturing creativity in young children. Almost all definitions of creativity involve the production of a novel idea as a result of recognizing a deficiency, formulating and testing hypotheses, and then communicating the results. However, traditional identification instruments overemphasize convergent thinking. Decrements in creativity occur at ages five, nine, and twelve. Creative students are a "minority of one" and are likely to feel isolated at home and school. Repression of creativity may result in self-concept issues, learning disabilities, and neurotic conflicts. Successful individuals develop strategies for dealing with both expression and repression of their creativity.

### Practice-based References

Freeman, C. (1999). The crystallizing experience: A study in musical precocity. *Gifted Child Quarterly*, 43, 75-85.

This study examines the nature of musical precocity and the mechanisms that mediate a "crystallizing experience." Howard Gardner (1983) has made a cogent argument for the inclusion of musical intelligence in the spectrum of human intelligences. He has proposed that this musical ability may evolve in different ways. One of these is the "crystallizing experience," a dramatic event in a person's life that makes manifest inherent giftedness. The crystallizing experience may serve as a useful construct for explaining how certain talented individuals first commit themselves to an area of giftedness. The present study involved 24 musically precocious boys of middle school age who were asked questions, individually and in focus groups, regarding the nature of crystallizing experiences. This study of the crystallizing experience revealed important implications for understanding the structure and composition of extraordinary performance. (Author's abstract).

Grantham, T., & Ford, D. (1998). A case study of the social needs of Danisha: An underachieving gifted African-American female. *Roeper Review*, 21, 96-101.

The purpose of this case study of a 15-year-old underachieving gifted African-American female was to identify social and emotional needs of gifted students. Data were collected through interviews, field observations, and school files. The authors found that Danisha struggled to accept Caucasian students' social norms and felt isolated in her gifted and talented classes. She wanted to integrate into the gifted classes, yet she didn't want to forfeit her relations with her African-American friends. They suggested that counseling needed to focus on issues related to racial identity; teachers needed multicultural training; and coordinators needed to identify more minority students in classes.

Hébert, T. P. (1998b). Gifted Black males in an urban high school: Factors that influence achievement and underachievement. *Journal for the Education of the Gifted*, 21, 385-414.

The case studies reported in this article describe the experiences of two gifted African American males in an

urban high school. Factors that influenced achievement appeared to be belief in self, family support, multicultural appreciation, sensitivity, and high aspirations. Factors that influenced underachievement appeared to be an inappropriate match with the curricular activities and learning style, inappropriate counseling and class placement, and inconsistent family role models. The authors suggest the importance of training counselors for diversity, working closely with families, and providing enrichment activities outside the school day.

Hong, E., & Aqai, Y. (2004). Cognitive and motivational characteristics of adolescents gifted in mathematics: Comparisons among students with different types of giftedness. *Gifted Child Quarterly, 48*, 191-201.

This study compares cognitive and motivational characteristics of high school students who are academically gifted in math, creatively talented in math, and nongifted. Whereas no differences were found among the three groups in their beliefs about ability, most of the other characteristics examined in the study distinguished the three groups. Academically gifted female students reported expending more effort than did academically gifted male students. Creatively talented males put forth more effort than academically gifted males, and the creatively talented in general used more cognitive strategies than the academically gifted. Overall, students who were either academically gifted or creatively talented in mathematics perceived that they were self-efficacious in general, used cognitive strategies, perceived their math ability and math self-efficacy to be high, and valued learning math more so than their nongifted age peers (Author's abstract).

Stainthorp, R., & Hughes, D. (2004). An illustrative case study of precocious reading ability. *Gifted Child Quarterly, 48*, 107-120.

This is a longitudinal case study of a child who taught herself to read before she went to school. This case study is drawn from a wider study of a group of precocious readers, all of whom had received no explicit instruction, but who had had positive literacy experiences in their homes. The subject of this study was able to read fluently at the age of 5 years and 4 months. Her reading was at least 5 years ahead of her chronological age and her spelling was 4 years ahead. Her reading speed was also very proficient. Moreover, tests indicated that her pseudoword reading was highly accurate and that she was highly proficient on a series of measures of phonemic awareness. Her performance was also assessed at the ages of 6, 7, and 11 years. She continued to show high levels of ability in all aspects of literacy. This study contrasts with recent case studies on very precocious readers who showed poor levels of phonological awareness and who were unable to spell at an early age. (Author's abstract).

## Standard 2: Development and Characteristics of Learners

### GT2K2

#### Characteristics and effects of culture and environment on the development of individuals with gifts and talents.

#### Research-based References

Cross, T. L., & Coleman, L. J. (1993). The social cognition of gifted adolescents: An exploration of the stigma of giftedness paradigm. *Roeper Review, 16*, 37-40.

The purpose of this study was to investigate social cognition of gifted adolescents using Coleman's (1985) Stigma of Giftedness Paradigm as a theoretical framework. The sample included 740 girls and 725 boys ages 14-18 in a competitive gifted program. A Student Attitude Questionnaire showed that over 50% of students do not often feel free to be themselves in their high school, and engaged in coping strategies, such as hiding differences from peers. The researchers assert that gifted students believe that people treat them differently when aware of their giftedness and over 40% see themselves as different compared to non-gifted peers.

Diaz, E. I. (1998). Perceived factors influencing the academic underachievement of talented students of Puerto Rican descent. *Gifted Child Quarterly 42*, 105-122.

This qualitative investigation explored the self and environmental perceptions of six talented students of Puerto Rican descent who were underachieving in an urban high school in the northeastern section of the

United States. Four factors were identified as influencing underachievement: family (strained relationships, unhappy home, inappropriate parental expectations, minimal academic guidance, inconsistency), school (inappropriate early curricula experiences, non-inspiring teachers, unrewarding curriculum, questionable counseling), community (hostile environment, gangs, prejudice, few constructive entertainment options), and personal (insufficient perseverance, low self efficacy, inappropriate coping strategies). The absence of early appropriate academic experiences appeared to be a major factor in the students' future success.

Ford, D. Y., & Harris III, J. (1997). A study of the racial identity and achievement of Black males and females. *Roeper Review*, 20, 105-110.

This study examined the racial identity and achievement of 152 Black males and females. Sixty-two students were underachieving with the greatest percentage being male. Students were administered the Racial Identity Scale for Black Students. Underachievers had less positive racial identities than achieving students. The authors conclude that counseling strategies may have to focus on helping some Black students cope with the difficulties inherent in attending gifted programs that are often predominantly white—negative peer pressures, poor peer relations, feelings of isolation, and sensitivity about feeling different.

Grantham, T., & Ford, D. (1998). A case study of the social needs of Danisha: An underachieving gifted African-American female. *Roeper Review*, 21, 96-101.

This case study of a 15-year-old underachieving gifted African-American female was conducted to identify social and emotional needs of gifted students. Data were collected through interviews, field observations, and school data. The authors found that Danisha struggled to accept Caucasian students' social norms and felt isolated in her gifted and talented classes. She wanted to integrate into the gifted classes, yet she didn't want to forfeit her relations with her African-American friends. They suggested that counseling needed to focus on issues related to racial identity; teachers needed multicultural training; and coordinators needed to identify more minority students in classes.

Hyde, J. S., Fennema, E., Ryan, M., Frost, L. A., & Hopp, C. (1990). Gender comparisons of mathematics attitudes and affect. *Psychology of Women Quarterly*, 14, 299-314.

Using a meta-analysis, the researchers find that the gender effect in mathematics measures is small. When differences do exist, they indicate a negative view held by women. It is important to note that the stereotype of mathematics being a male-dominated area may affect women's willingness to advance in the field. The cumulative effect of this stereotype and attitudes over many years is unknown.

### **Literature/Theory-based References**

Csikszentmihalyi, M., & Wolfe, R. (2000). New conceptions and research approaches to creativity: Implications of a systems perspective for creativity in education. In K. A. Heller, F. J. Mönks, & A. Harry Passow (Eds.). *International Handbook of Research and Development of Giftedness and Talent* (pp. 81-93). New York: Pergamon.

The authors describe creativity as the interface of three subsystems—the individual, the field, and the domain. A person does not act alone without taking into account environmental conditions. If the individual is able to change the culture in a way that is relevant to the gatekeepers of the field, then the new variation will be transmitted over time and incorporated within the domain.

Dai, D. Y., Moon, S. M., & Feldhusen, J. F. (1998). Achievement motivation and gifted students: A social cognitive perspective. *Educational Psychologist*, 33(2/3), 45-63.

The authors propose a social cognitive model for motivational processes research involved in the intellectual and personal development of GT students. Self-perception is important in the achievement motivation of gifted students.

Ericsson, K. A., & Charness, N. (1994). Expert performance: Its structure and acquisition. *American Psychologist*, 49, 725-747.

Talent is the product of deliberate training. Extended training among superior performers alters the cognitive

and physiological processes of experts. The authors assert that the available evidence for innate talent and specific gifts as necessary conditions for attaining the highest levels of performance should be reexamined and talent as a product of effort should be considered in order to increase human ability.

Ford, D. Y., Moore III, J. L., Milner, H. R. (2005). Beyond culture blindness: A model of culture with implications for gifted education, *Roeper Review*, 27, 97-103.

This article seeks to define culture and examines culturally diverse students in gifted programs. Culture affects sense of identity within a group, concept of self and time, personal and social responsibility, locus of control, and communication. These variables along with testing, teacher referral, identity and social issues, and policies and procedures contribute to underrepresentation. Culture shock occurs when there are differences between teachers and students. Instead of ignoring differences or holding stereotypic beliefs, educators must be sensitive to cultural differences and create learning environments where students feel safe physically and psychologically in order to overcome low performance and underachievement.

Freeman, J. (2004). Cultural influences on gifted gender achievement. *High Ability Studies*, 15(1), 7-23.

In Britain, the academic achievements of gifted girls in school are surpassing those of gifted boys in all areas of study and at all ages. Emotionally, British girls are showing greater confidence and the educational changes may encourage female study patterns. There are still no significant differences in the workplace.

Gross, M. U. M. (1993). The 'me' behind the mask: Intellectually gifted students and the search for identity. *Roeper Review*, 20, 167-174.

Gross writes about gifted individuals who spend their lives concealing their giftedness in order to blend in socially. Even at a young age, gifted students with advanced moral development and intellectual giftedness experience discomfort with a peer culture that emphasizes conformity. Gross asserts that intellectually gifted children must accept one's self and that this is an essential part of forming one's identity and forming meaningful relationships.

Plucker, J. A., Robinson, N. M, Greenspon, T. S., Feldhusen, J. F., McCoach, D. B., & Subotnik, R. F. (2004). It's not how the pond makes you feel, but rather how high you can jump. *American Psychologist*, 59(4), 168-269.

The authors respond to a previous study regarding highly selective programs and their effects on self-concept. They find that self-concept gains derived from specialized programming is overstated. However, without a challenging learning environment, students' sense of confidence, psychological well-being, and motivation to learn new things can be seriously undermined. There should be more research about the impact of group achievement on individual achievement.

Nisbett, R. (2003). *The geography of thought: How Asians and Westerners think differently . . . and why*. New York: Free Press.

Describes history and theory of differences between East Asians and Westerners in perception and cognition linked to culture and geography and summarizes research support.

Shade, B. J. (Ed.) (1997). Culture, style, and the educative process: Making schools work for racially diverse students (2<sup>nd</sup> ed.). Springfield, IL: Charles C. Thomas.

Many students of color are not performing to their maximum potential within the current school setting, and examinations of this problem suggest significant differences between students and teacher perceptions of how one becomes educated. The underlying assumptions of this book are that culture, through the mediation of cognitive style, determines affective and cognitive behaviors that an individual selects to meet environmental demands, and therefore, cognitive style significantly affects an individual's competent performance in various settings. Focusing on African American, Mexican American, American Indian, and Hmong children, reviews and studies examine the cultural perspectives that accompany students to school and ultimately influence their responses to the school setting. The book's three sections provide cultural background (particularly on child rearing and social interaction) for various racial and ethnic groups; discuss learning styles, with particular attention to field-independent and field-dependence; and suggest ways to improve the psychological climate of learning (ERIC abstract).

Siegle, D., & Reis, S. M. (1998). Gender differences in teacher and student perceptions of gifted students' ability and effort. *Gifted Child Quarterly*, 42, 39-47.

Gifted girls and boys may be treated differently in the classroom due to teacher attitudes. Gifted girls may be perceived as harder workers, but the gifted boys receive higher grades. This results in gifted girls accepting teacher evaluations of their "lower" ability.

### Practice-based References

de Souza Fleith, D. (2000). Teachers and student perceptions of creativity in the classroom environment. *Roeper Review*, 22(3), 148-153.

This study investigated teachers and students' perceptions about classroom characteristics that enhance or inhibit the development of creativity. The 7 third and fourth grade classroom teachers viewed classroom environments that enhance creativity as providing choice, building confidence, accepting students as they are, and helping them become aware of their creativity. Instructional strategies used were brainstorming, flexible directions, arts, center, free time, cluster and cooperative groups. Activities that enhanced creativity had these characteristics: open-ended, hands-on, creative writing, and drawing. The students also described the classroom as one where they enjoyed their work and had fun, their relationships with other people positively, and the importance of choices of activities.

Harmon, D. (2002). They won't teach me: The voices of gifted African American inner-city students. *Roeper Review*, 24, 68-75.

This study examined the effects of bussing from a lower income, predominantly minority, elementary school to a middle to upper income, predominantly majority elementary school. African American students who were bussed were angry about attending another school, receiving harassment, were rejected by their white peers, and stayed with their own minority group. In their other school, they felt more comfortable and did not experience the harassment. They viewed ineffective teachers as having low expectations, lacking an understanding, and providing unfair and unequal treatment. On the other hand, effective teachers had high expectations, understood the culture, and provided fair and equal treatment. Three of the effective teachers mentioned that they required respect in their classrooms, provided community role models, and spent considerable time developing activities and lessons that presented knowledge from multiple perspectives.

Hébert, T. P. (1991). Meeting the affective needs of bright boys through bibliotherapy. *Roeper Review*, 13, 207-212.

Hébert uses case studies to examine several social and emotional issues facing gifted young males: image management, self-inflicted pressure, being labeled "different," male bonding, cultural expectations, and gender role conflict. Affective needs of bright boys must be recognized as well as considering academic needs. Bibliotherapy is suggested as one strategy for helping gifted males deal with some of these issues.

Kanevsky, L., & Keighley, T. (2003). To produce or not to produce? Understanding boredom and the honor in underachievement. *Roeper Review*, 26, 20-28.

This study examined underachievement in gifted adolescents. The sample consisted of ten 15- to 18-year-old students who had been identified as gifted in elementary school, were currently academically underachieving, and had dropped out of or been suspended from school on at least one occasion. The case studies including 7 girls and 3 boys showed that students need responsibility for their own learning. The researchers find that learning is the opposite of and cure for boredom. Control, choice, challenge, complexity, and caring teachers were independent factors that determined engagement and academic productivity.

Kitano, M. K., & Pedersen, K. S. (2002a). Action research and practical inquiry: Multicultural content integration in gifted education: Lessons from the field. *Journal for the Education of the Gifted*, 25(3), 269-289.

Using practical inquiry, the researchers initially asked 58 elementary and 79 secondary teachers to respond

to a brief survey on multicultural education. Most of the respondents (77.5%) were teaching gifted students. The majority of teachers identified these topics as goals for gifted students: contributions of people from diverse groups; valuing diversity; literature, art, traditions, history of diverse groups; issues of prejudice, racism, discrimination; stereotypes; prejudice reduction; understanding oneself and others; perspectives of diverse groups on a topic or event; issues of sexism. The researchers then observed in the classroom and collected information from professional development activities. They reported examples of teachers who engaged their classes in multicultural activities.

Shade, B. J., Kelly, C., & Oberg, M. (1997). *Creating culturally responsive classrooms*. Washington, DC: American Psychological Association.

This action guide helps teachers understand student differences from an environmental and contextual perspective, explaining how to better engage students in the learning process so they can increase their academic performance. The guide focuses on students who are African American, American Indian, Mexican American, and Hmong. Section 1, "Introduction: A Vision of the Future," presents underlying assumptions and explains the guide's goals. Section 2, "Understanding Cultural Backgrounds," discusses culture as the backdrop for learning, focusing on African American, American Indian, Mexican American, and Asian American cultural styles and cultural style in the schools. Section 3, "Understanding How Culture Influences Motivation," explains how to create a culturally compatible classroom and offers an example of a culturally responsible learning community. Section 4, "Identifying Ways to Structure a Culturally Compatible Classroom," discusses conducting culturally relevant teaching, creating Afrocentric classrooms, developing bilingual classrooms, and developing classrooms for American Indians. Section 5, "Increasing Knowledge of Culturally Compatible Strategies," focuses on culturally responsive environments, culturally responsive curriculum, stylistically responsive instructional strategies, and culturally connected instructional strategies (ERIC abstract).

## Standard 2: Development and Characteristics of Learners

### GT2K3

#### Role of families and communities in supporting the development of individuals with gifts and talents.

#### Research-based References

Albert, R. S. (1994). The achievement of eminence: A longitudinal study of exceptionally gifted boys and their families. In R. F. Subotnik & K. D. Arnold (Eds.). *Beyond Terman: Contemporary longitudinal studies of giftedness and talent*. Norwood, NJ: Ablex.

This 10-year longitudinal study examined demographic, birth order, intellectual, achievement, creativity, personality, and family influences on exceptionally gifted boys., beginning at age 12 through age 22. They found that early cognitive giftedness is necessary but not sufficient in personal development and career choice. "Early ego development, creative potential, and later personality changes are related to their parents' personalities, levels of creative potential and ego development, and the specific presses these boys had experienced" (p. 309).

Bloom, B. S., & Sosniak, L. A. (1981). Talent development vs. schooling. *Educational Leadership*, 39, 86-94.

This study concentrated on 25 talented individuals, their parents, and teachers to better understand the educational process. Talent development emphasizes the child's mastery and the pace of learning was individualized. Classroom instruction emphasizes group learning. When the home places importance on the same skills taught at the school, then the learning is reinforced. "Talent development is encouraged and rewarded by events that take place outside of the home or instructional setting" (p. 91). The authors report few cases in which talent development and schooling function complement each other. Students felt that these were separate entities and competed for their time.

Siegle, D., & Schuler, P. A. (2000). Perfectionism differences in gifted middle school students. *Roepers Review*, 23, 39-44.

The purpose of this study was to explore perfection differences of gifted young adolescents. A sample of 391 gifted students in grades 6-8 included 223 girls and 164 boys. The Goals and Work Habits Survey (Schuler, 1994), was used to measure factors affecting perfectionism. Results indicate an increase in girl perfectionism throughout middle school and boys reported higher parental expectations. First-born reported the highest levels of parental criticism. Adolescent concerns of organization and personal standards were more problematic as compared to concern over mistakes and parental criticism.

VanTassel-Baska, J., Olszewski-Kubilius, P., & Kulieke, M. (1994). A study of self-concept and social support in advantaged and disadvantaged seventh and eighth grade gifted students. *Roeper Review*, 16, 186-191.

Past research focuses on parents in talent development but with economically disadvantaged children and others with untraditional family situations, it appears that siblings, grandparents, adults in the community, teachers, and others are more likely to serve as the primary influence in the development of talent.

### Literature/Theory-based References

Berk, L. E. (2004). *Development Through the Lifespan*. Boston: Pearson Education, Inc.

Social support outside the immediate family, and a strong community are two factors that contribute to a students' resiliency, or "the ability to adapt effectively in the face of threats to development" (Berk, 2004, pp. 10-11). Positive role models outside of the family are another way that students can gain resources and information.

Gagné, R. J. (2000). Understanding the complex choreography of talent development. In K. A. Heller, F. J. Mönks, & A. Harry Passow (Eds.). *International Handbook of Research and Development of Giftedness and Talent* (pp. 67-79). New York: Pergamon.

Gagné describes his Differentiated Model of Giftedness and Talent that includes six components important in the development of talent. In this model natural abilities are developed through the interaction with environmental and intrapersonal catalysts. Environmental catalysts include persons such as parents, teachers, peers, and mentors and the physical, cultural social, and familial milieus.

Moon, S. M., Jurich, J. A., & Feldhusen, J. F. (1998). Families of gifted children: Cradles of development. In R. C. Friedman & K. Rogers (Eds.). *Talent in context: Historical and social perspectives on giftedness* (pp. 81-99). Washington, DC: American Psychological Association.

Using family systems theory, the authors describe the unique dynamics within families of gifted children including values, relationships, stress and adaptation, and interactions with other systems (e.g., school, neighborhood, peer, and support networks). The authors conclude that the family plays a crucial role in the development of talent and encourage more research about the characteristics of families of the gifted, the role of the family in facilitating talent development and social-emotional growth, family-school relationships, and family counseling and family therapy.

Piirto, J. (1991). Why are there so few? (Creative women: Visual artists, mathematicians, musicians). *Roeper Review*, 13, 142-147.

Piirto reports no personality differences between genders, but choices made after college (a time when commitment and regular effort in the field of creativity matters) account for the few creative women in the arts and math fields. Parental expectations about having children play a role. Women attempt to reconcile being the nurturing, recessive, female versus the unconventional creative artist and are more apt to see family duties equally as important as their work. However, prominence in creative fields require early achievement and continued production. Later career productivity due to reproductive and family necessity may hinder genuine eminence in creative fields.

Subotnik, R. F., & Olszewski-Kubilius, P. (1997). Restructuring special programs to reflect the distinctions between children's and adults' experiences with giftedness, *Peabody Journal of Education*, 72 (3&4), 101-116.

Using the eminence literature, the authors describe experiences that might be successful for channeling

participants into promising career trajectories. The talent development activities include access to elite levels of adult creators and performers, excellent teachers and mentors, long-term engagement in a specific talent field, competitions, summer and extracurricular programs. Parents are important in modeling the habits conducive to talent development, building supportive social support systems, and assisting children to acquire certain personality dispositions.

### Practice-based References

Borland, J. H., Schnur, R., & Wright, L. (2000). Economically disadvantaged students in a school for the academically gifted: A postpositivist inquiry into individual and family adjustment. *Gifted Child Quarterly*, 44, 13-32.

This follow-up study reports the effects of the placement in a school for gifted students of five economically disadvantaged minority students from central Harlem who were identified in kindergarten as potentially academically gifted. The authors concluded that the students made better academic progress than could have been expected, were integrated socially, and appeared to be experiencing no adverse emotional reaction. The authors believe that their success was dependent upon the students, the families, and the school setting. They also assert that the identification of economically disadvantaged students as potentially gifted is valid.

Hébert, T. P., & Neumeister, K. L. S. (2000). University mentors in the elementary classroom: Supporting the intellectual, motivational, and emotional needs of high-ability students. *Journal for the Education of the Gifted*, 24, 122-148.

Case study and ethnographic research methods were used to examine how a fourth-grade teacher implemented a mentoring program and its effect on the students. The teacher was able to create 18 successful partnerships between her students and university mentors. The program design included preplanning, instructional strategies and flexibility. The teacher also implemented curriculum compacting so that the high ability students would have time to work with their mentors. The program met the goal of meeting differentiated needs of the students and created opportunities for new relationships between the university mentors and the teachers' students.

Melber, L. M. (2003). Partnerships in science learning: Museum outreach and elementary gifted education. *Gifted Child Quarterly*, 47, 251-258.

This study examined a museum program and its effects on high achieving fourth and fifth graders. The museum program consisted of eight school-based sessions, held twice weekly, that allowed students to participate in activities that were similar to the scientific processes employed by museum scientists and incorporated actual museum specimens and artifacts. The ninth session occurred in the museum where students met the scientists and visited areas normally closed to the public. Pre- and post questionnaires indicated that students were more interested in being a scientist, had less stereotyped ideas about a scientist's work, and gained content knowledge.

Moon, T. R., & Callahan, C. M. (2001). Curricular modifications, family outreach, and a mentoring program. *Journal for the Education of the Gifted*, 24, 305-321.

The researchers studied the interventions of mentoring, parental involvement, and multicultural curricula on the academic achievement of 273 elementary students from low socioeconomic environments. They reported that students were on grade level by the end of the project. In addition, students who participated in the project gained in their problem solving abilities, creativity, and social skills, and were referred and placed more often in gifted programs than students who did not receive the project's benefits. They concluded that educators need to create supportive environments and involve parents in order to nurture the children in more challenging circumstances.

Reilly, J. M., & Welch, D. B. (1994/1995). Mentoring gifted young women. *The Journal for Secondary Gifted Education*, 6, 120-128.

The Mentor Connection is a community-based learning experience for 11th and 12th grade girls enrolled in suburban high schools. Students who participate complete an application and must show evidence of perseverance, ability, creativity, and have an identified area of study. This study reported the reactions of 162

former students to their mentoring experience. The participants reported these effects: the identification of a career; more confidence in their professional and personal abilities; an increase in ability to interact with other professionals; an understanding of the importance of networks; a relationship to their current career choice; and an overall enthusiasm for the high school experience.

## Standard 2: Development and Characteristics of Learners

### GT2K4

#### Advanced developmental milestones of individuals with gifts and talents from early childhood through adolescence.

#### Research-based References

Ablard, K. E., & Tissot, S. L. (1998). Young students' readiness for advanced math: Precocious abstract reasoning. *Journal for the Education of the Gifted*, 21, 206-223.

This study examined above grade level abstract reasoning abilities of 150 academically talented students ranging from 2<sup>nd</sup> through 6<sup>th</sup> grades. Understanding of various abstract concepts varied by age for only 4 of the 8 subscales: probability, proportion, momentum, and frames of references. In general, the students performed like students who were four grade levels higher. Those in third grade performed at five grade levels higher. The authors conclude that there may not be one age at which children acquire abstract reasoning. They are ready for advanced mathematics at a much earlier age.

Carter, K. R. (1985). Cognitive development of intellectually gifted: A Piagetian perspective. *Roeper Review*, 7, 180-184.

Relationships between intellectual giftedness and performance within Piagetian stages of 673 gifted students (10-16 years old) were investigated. Results showed that intellectually superior children out-performed children of normal ability at all age levels. Intellectually superior subjects out-performed bright-normal subjects at lower ages, but no differences were found during later (ERIC abstract).

Carter, K. R., & Ormrod, J. E. (1982). Acquisition of formal operations by intellectually gifted children. *Gifted Child Quarterly*, 26, 110-115.

The cognitive development of 125 gifted 10-15-year-old students was compared to that of 98 normal subjects. Results supported the invariance of stage progression but revealed that gifted subjects progress more quickly and demonstrate earlier transition to succeeding developmental stages. (ERIC abstract).

Gross, M. U. M. (1992). The use of radical acceleration in cases of extreme intellectual precocity. *Gifted Child Quarterly*, 36, 91-99.

This paper reviews the school histories of five extremely gifted children, of IQ 160-200, who have been radically accelerated. Prior to their acceleration, the children were retained in the regular classroom in a lockstep curriculum based on their chronological age and grade placement. They suffered severe intellectual frustration, boredom, lack of motivation, and social rejection by age-peers, and displayed significantly lowered levels of social self-esteem. A combination of grade-skipping and radical subject matter acceleration has given the children access to curricula commensurate with their academic achievement levels and the intellectual and social companionship of children who share their abilities and interests. The young accelerants are more stimulated intellectually, enjoy closer and more productive social relationships, and display healthier levels of social self-esteem than do equally gifted children who have been retained with age-peers of average ability. (Author's abstract).

Lupkowski-Shoplik, A. E., & Assouline, S. G. (1994). Evidence of extreme mathematical precocity: Case studies of talented youths. *Roeper Review*, 16, 144-151.

This article describes four extraordinarily talented youngsters. By the time that Steve was 6 1/2 years old, he could solve algebra problems, type 50 words a minute, and write his own computer programs. By the age of

three, Peter could count more than 20 objects accurately, count, read numbers past 1,000, read silently, calculate sums and differences of numbers less than 10, and play nursery songs on his xylophone accurately. By the time *Joanna* was 2 1/2, she was adding and subtracting Cheerios® at breakfast. Besides early mathematical problem solving ability, *Lisa* read fluently by the time she was 3 1/2 and learned all of the basic operations in mathematics when she was six years old.

Robinson, N. M., Abbott, R. D., Berninger, V. W., Busse, J., & Mukhopadhyay (1997). Developmental changes in mathematically precocious young children. *Gifted Child Quarterly*, 41, 145-158.

Young children with advanced mathematical skill (N=276) were followed for two years, during kindergarten through 1<sup>st</sup> grade or 1<sup>st</sup> through 2<sup>nd</sup> grade. Children were randomly assigned to an intervention condition reflecting a constructivist approach or a control condition. Mean scores for the control group on standardized math, verbal, and visual-spatial measures increased or remained the same. Boys gained more than girls on the quantitative and visual-spatial measures. The treatment group made greater gains than the control group on quantitative measures only. Gender did not interact with treatment condition. Correlations among the quantitative, verbal, and visual-spatial factors remained stable for control children, but the correlation between quantitative and verbal factors increased for the intervention group. (Authors' abstract)

### Literature/Theory-based References

Feldman, D. H. (2003). A developmental, evolutionary perspective on giftedness. In J. H. Borland (Ed.), *Rethinking gifted education*. (pp. 9-33). New York: Teachers College, Columbia University.

The author describes the meaning of nonuniversal development as movement through levels of expertise in a specific domain from novice to master. Development with the context of expertise focuses on general and specific capabilities that may not be necessarily cognitive in nature. Development also “focuses on conditions that foster, encourage, challenge, crystallize, and recognize expertise in each valued developmental domain” (p. 33).

Gross, M. U. M. Small poppies: Highly gifted children in the early years. *Roeper Review*, 21, 207-214.

The gifted child begins to speak an average of two months earlier than the average child. By the age of 4.5 the mean number of words for average children was 4.6 words while for gifted is 9.5. However, young gifted students may learn to moderate their vocabulary if they sense peer disapproval at school. Occasionally, gifted students' speech is delayed.

Henderson, L. M., & Ebner, F. F. (1997). The biological basis for early intervention with gifted children. *Peabody Journal of Education*, 72(3&4), 59-80.

The authors describe the differentiated developmental course of gifted children discussing their early progression through developmental milestones such as early discrimination among mother and others; early talking and interest in books, early use of symbol systems, early interest in, questions about, and understanding of abstract issues, earlier passage through theoretical developmental stages (p. 70). The authors conclude that this advanced development is indicative of earlier brain maturation and the need for early intervention.

Silverman, L. K. (1997). The construct of asynchronous development. *Peabody Journal of Education*, 72(3&4), 36-58.

Gifted students are at higher risk in experiencing asynchronous development. This describes the discrepancy between intellectual development and physical and/or social development that leads to internal struggles and social problems.

Winner, E., & Martino, G. (2000). Giftedness in non-academic domains: The case of the visual arts and music. In K. A. Heller, F. J. Mönks, & A. Harry Passow (Eds.). *International Handbook of Research and Development of Giftedness and Talent* (pp. 95-110). New York: Pergamon.

Gifted children are not only more advanced than typical children in drawing milestones but they draw in a qualitatively different way. Their drawings appear highly realistic, and they are able to draw recognizable

shapes representing objects in the world at around the age of 3 or 4. They also develop a sense of the adult art world within their culture, become thematically specialized, and by middle childhood and adolescence, create imaginary settings and fantasy characters. Musical children respond more to music than do average children and are able to sing back heard songs with accuracy before they are one year old. They often have perfect pitch, sight read music easily, improvise existing music, represent musical relations in multiple ways, and are sensitive to the expressive properties of music.

### Practice-based References

Barnett, L. B., & Durden, W. G. (1993). Education patterns of academically talented youth. *Gifted Child Quarterly*, 37, 161-168.

In this study 228 seventh grade students who participated in the Johns Hopkins University Center for Talented Youth (CTY) Academic Programs were compared to 186 eligible seventh grade students who did not enroll in CTY courses. The researchers used an ex post facto survey method to collect their data. They found that both groups were very successful academically in high school. Both took Advanced Placement and accelerated course work in a broad range of disciplines and received high scores. They also distinguished themselves in extracurricular activities and graduated with distinction. However the key differences between the groups related to their pursuit of a more challenging high school curriculum, results of standardized achievement tests, and college admission. The CTY group pursued calculus and took college courses earlier and had a higher proportion of students who accelerated in subject areas.

Kolitch, E. R., & Brody, L. E. (1992). Mathematics acceleration of highly talented students: An evaluation. *Gifted Child Quarterly*, 36, 78-86.

Approximately 750 students who had participated in the Study of Mathematically Precocious Youth responded to a questionnaire regarding the effects of the program. These students did well in mathematics courses taken several years earlier than is typical and excelled on AP calculus examinations. The majority of the students took calculus two and a half years earlier. The students also participated in mathematics competitions and summer programs, reported working with mentors, became involved in independent projects, and read mathematics books on their own. In general, the females appeared to be less likely to accelerate greatly.

Lupkowski-Shoplik, A. E., & Assouline, S. G. (1994). Evidence of extreme mathematical precocity: Case studies of talented youths. *Roeper Review*, 16, 144-151.

Given the difficulty that the parents encountered in attempting to find appropriate programming in public school, the researchers made some of these suggestions: Parents should be advocates for their children, have their child tested using standardized testing, and find enrichment programs outside the school system. Assessments should identify skills and content that the children already know so they might be challenged in school. Acceleration should be balanced with the study of other academic subjects and extracurricular activities. Talented students need to find an intellectual peer group.

Lynch, S. J. (1992). Fast-paced high school science for the academically talented: A six-year perspective. *Gifted Child Quarterly*, 36, 147-154.

This article reports the results of a six-year study of academically talented students, 12 to 16 years old, who completed a one-year course in high school biology, chemistry, or physics in three weeks at a residential summer program. Students demonstrated subject mastery by taking college Entrance Examination Board science achievement tests. Their mean scores were higher than those of high school juniors and seniors. Follow-up studies indicated that students also performed well in subsequent science courses.

Noble, K. D., Robinson, N. M., Gunderson, S. A. (1993), All rivers lead to the sea: A follow-up study of gifted young adults. *Roeper Review*, 15, 124-130.

The Early Entrance Program (EEP) has enabled highly capable adolescents in western Washington state to enroll in college before age 15. Students are selected for the EEP on the basis of scores on the Washington PreCollege Test, the Stanford-Binet IV, a 20-minute essay, achievement test records, class grades, teacher recommendations, interviews with students and their families, and the student's own motivation. A follow-up survey of 109 participants indicated that these students were satisfied with their decision to accelerate their

secondary education, were working in career-related jobs or were planning to attend graduate school. The authors found no social and emotional adjustment problems.

Swiatek, M. A. (1993). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review*, 15, 120-123.

Five cohorts who participated in the Johns Hopkins University Study of Mathematically Precocious Youth were surveyed at the age of 19, some at the age of 23, and some at the age of 33. Students who choose to accelerate in high school do not suffer academically but gain speed in their educational preparation. These students perform well at advanced levels of study, complete college, and attend graduate school in numbers that exceed the national average. In addition, the students also express satisfaction with college and their experiences.

## Standard 2: Development and Characteristics of Learners

### GT2K5

#### Similarities and differences within the group of individuals with gifts and talents and compared to the general population.

#### Research-based References

Cornell, D. G., Delcourt, M. A. B., Bland, L. C., Goldberg, M. D., & Oram, G. (1994). Low incidence of behavior problems among elementary school students in gifted programs. *Journal for the Education of the Gifted*, 18, 4-19.

This study examined differences in behavior problems between gifted or regular students. This sample consisted of 675 gifted students and 322 regular students. In the fall of their 2<sup>nd</sup> or 3<sup>rd</sup> grade the students were administered the subtests from Form J of the Iowa Test of Basic Skills (Cornell et al., 1992). The teachers completed the Teacher Report Form (TRF; Achenbach & Edelbrock, 1986) along with the Child Behavior Checklist. The authors found no significant differences of behavior problems between gifted and non-gifted elementary students.

McCoach, D. B., & Siegle, D. (2002). The structure and function of academic self-concept in gifted and general education students. *Roeper Review*, 25, 61-65.

In this study, the gifted sample demonstrated higher academic self-perceptions and higher self-reported GPAs than the general school sample. However, the relationship between academic self-perceptions and self-reported GPA was invariant across groups. For both gifted students and the general population of high school students, GPA and academic self-perception are moderately and positively related. Although there are large mean differences between groups, the structure of the relationship between academic self-perception and GPA was similar in this sample. It remains to be seen whether increasing students' academic self-perceptions results in achievement gains for low achieving students.

Milbrath, C. (1998). *Patterns of artistic development in children: Comparative studies of talent*. Cambridge, UK: Cambridge University Press.

In this study of eight artistically gifted children over ten years, Milbrath compared a group of artistically gifted children between the ages of 4-14 to a normal control group. Milbrath concluded that the children encode visual information more accurately and see the world in terms of shapes and visual surface features. They also have superior visual memories and can see when something looks wrong on paper.

Orange, C. (1997). Gifted students and perfectionism. *Roeper Review*, 20, 39-41.

Orange used this study to refine the construct of perfectionism by administering the Perfectionism Quiz to 109 students from 18 different high schools attending an honors conference in southwest Texas. The sample included 156 boys and 200 girls with a mean age of 16 years old. The ethnicity included 60% White, 30% Hispanic, and 10% African American. The authors reported that 89% of the students scored in the top two

categories, suggesting that perfectionism is a characteristic prevalent in this sample.

Roberts, S. M., & Lovett, S. B. (1994). Examining the "F" in gifted: Academically gifted adolescents' physiological and affective responses to scholastic failure. *Journal for the Education of the Gifted*, 17, 241-259.

This study investigated whether gifted children were subject to perfectionistic irrational beliefs. The sample included 60 junior high students and instruments used included the Common Belief Inventory for Students (CBIS; Hooper & Layne, 1983), the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991), School Failure Tolerance Scale (SFT; Clifford, 1988), a Current Affect Measure designed by the researchers and an effort expenditure scale. Academically gifted students experienced a significantly greater decrease in positive affect and greater increase in negative affect than academic achievers and nongifted students after the induced failure, and a larger physiological response. Perfectionistic tendencies of highly gifted were internalized rather than socially prescribed.

### **Literature/Theory-based References**

Gottfried, A. E., & Gottfried, A. W. (2004). Toward the development of a conceptualization of gifted motivation. *Gifted Child Quarterly*, 48, 121-132.

The researchers attempt to move towards a gifted motivation construct: (a) significantly higher academic intrinsic motivation is evidenced by intellectually gifted compared to their comparison cohort; (b) academic intrinsic motivation is significantly, positively, and uniquely related to academic intrinsic motivation evidences substantial continuity from childhood through adolescence; and (d) environment is significantly related to academic intrinsic motivation. Suggestions are made regarding research needed for further development of a gifted motivation construct.

Gross, M. U. M. (2000). Issues in the cognitive development of exceptionally and profoundly gifted individuals. In K. A. Heller, F. J. Mönks, & A. Harry Passow (Eds.). *International Handbook of Research and Development of Giftedness and Talent* (pp. 179-192). New York: Pergamon.

This article describes differences between gifted and non-gifted children in cognitive functioning. Gifted children exhibit significant differences in cognitive style, cognitive development and cognitive strategy selection. Exceptionally gifted children exhibit developmentally advanced behaviors at even a younger age. For example, at the age of 18 months, when children of average ability were uttering a mean number of 1.2 words per remark, their gifted age-peers were uttering 3.7 words. Gifted students who read early preferred books that the average child read at ages 11 or 12.

Hodge, R. D., & Renzulli, J. S. (1993). Exploring the link between giftedness and self-concept. *Review of Educational Research*, 63, 449-465.

The authors reviewed previous studies and found that overall, gifted children had generally higher self-concepts as compared to average children. However, the authors warn that there were many variable results among the studies and that group data may conceal individual effects. They do not find that self-esteem is a problem for gifted students.

McLaughlin, S. C., & Saccuzzo, D. P. (1997) Ethnic and gender differences in locus of control in children referred for gifted programs: The effects of vulnerability factors. *Journal for the Education of the Gifted*, 20, 268-284.

This study investigated gifted and non-gifted students and the correlation among ethnicity, gender, vulnerability factors, and locus of control (the relationship between one's behavior and the outcome of those actions). Over 800 fifth through seventh grade students with diverse backgrounds and characteristics were evaluated for intellectual ability, vulnerability factors, and locus of control. The results showed a significant relationship between ethnicity and vulnerability. In addition, a higher internal locus of control was associated with not at risk, female, Caucasian students. The authors believed the findings lead to two conclusions. There is more internal locus of control in gifted children. Gifted minority students' vulnerability is associated with a greater internal locus of control.

Robinson, A., & Clinkenbeard, P. R. (1998). Giftedness: An exceptionality examined. *Annual Review of Psychology*, 49, 117-139.

Gifted students tend to be more internally motivated and have positive attributions for their success and failure. Other motivational factors from previous studies included a strong locus of control, high effort, no test anxiety, less concern with peer pressure, strong extracurricular intellectual or creative interest, advanced and independent study, and relating school success to personal goals.

### Practice-based References

Davalos, R., & Griffin, G. (1999). The impact of teachers' individualized practices on gifted students in rural, heterogeneous classrooms. *Roeper Review*, 21(4), 308-314.

In this study, the researchers spent more than 350 hours observing teachers while they were being trained to individualize instruction and during the implementation of training goals. The results indicated that gifted students might be served in a heterogeneous classroom if the classroom teacher (a) understands its benefits and is highly motivated to use individualization as an instructional technique, (b) is willing to give control over learning to the students themselves, (c) understands academic, social, and emotional needs of gifted learners and is prepared to support those needs, and (d) receives proper training in individualization techniques.

Friedman, R. C., & Lee, S. W. (1996). Differentiating instruction for high-achieving/gifted children in regular classrooms: A field test of three gifted-education models. *Journal for the Education of the Gifted*, 19, 405-436.

This study examined three instructional models: the Enrichment Triad Model (Renzulli & Reis, 1986), the Multiple Talent Model (Taylor, 1986), and the Cognitive-Affective Interaction Model (Williams, 1986). These models were field-tested in inclusive, general-education classrooms in rural, low-income, and/or ethnically diverse communities. Using a multiple-baseline-across-settings design, the researchers interviewed the participants and observed in teachers' classrooms. They found that a strong positive relationship existed between teacher questions and student responses--the higher cognitive level of the teacher question elicited higher cognitive levels of student responses. The students in classrooms using the Cognitive-Affective Interaction Model demonstrated the greatest gains in higher cognitive levels.

Gentry, M., & Owen, S. V. (1999). An investigation of the effects of total school flexible cluster grouping on identification, achievement, and classroom practices. *Gifted Child Quarterly*, 43, 224-243.

The study examined the use of cluster grouping during a four-year period in a small, rural school district. The comparison sample involved students who had not been involved in cluster grouping in a demographically similar school. While the students in the treatment schools outperformed the comparison groups in reading and math. In addition, teachers created challenge through integrating high order thinking skills, developing critical thinking skills, using creative thinking skills, integrating problem solving, assigning projects, using acceleration, and adjusting assignments.

Hughes, L. (1999). Action research and practical inquiry: How can I meet the needs of the high-ability student within my regular education classroom? *Journal for the Education of the Gifted*, 22, 282-297.

Using data collected from student questionnaires, parent interviews, classroom observations, and teacher-student portfolio conferences, this fourth-grade-teacher-identified activities for her high-ability students: differentiated instruction, student choice, flexible groupings, and mixed enrichment with acceleration. The teacher reported that using these strategies, students were not doing the same thing, were not "stuck" in the same group all year, were able to make choices that matched their interests and abilities, enjoyed enrichment and acceleration, and reported a positive classroom atmosphere.

Nugent, S. A. (2000). Perfectionism: Its manifestations and classroom-based interventions. *The Journal of Secondary Gifted Education*, 11, 215-221.

Nugent describes perfectionism as the pursuit of excellence transformed into stalking perfection. Gifted students are at least as susceptible when compared with the general population. Negative manifestations of perfectionism may include eating disorders, depression, underachievement, substance abuse, obsessive-compulsive personality disorder, and suicide. Classroom manifestations of perfectionism may include delay in assignment completion, impatience with others' imperfections, repeatedly starting over on assignments, and overreactions to minor errors. Teachers of gifted students should help students distinguish between

excellence and perfection and create a classroom culture where students can learn from mistakes.

VanTassel-Baska, J., Bass, G., Reis, R., Poland, D., & Avery, L. D. (1998). A national study of science curriculum effectiveness with high ability students. *Gifted Child Quarterly*, 42, 200-211.

The purpose of this study was to assess student growth on integrated science process skills after being taught a 20-36 hour science unit called "Acid, Acid Everywhere." The sample consisted of 1,471 gifted students from self-contained gifted, pull-out, heterogeneous with gifted clusters, and heterogeneous classrooms. Results indicated significant gains in science skills for gifted students who were involved in the science unit compared to the students who did not participate in the unit. The findings support the use of curriculum designed specifically for gifted students, in this case the science unit, to enhance understanding of a subject and develop integrated process skills.

## Standard 3: Individual Learning Differences

Educators of the gifted understand the effects that gifts and talents can have on an individual's learning in school and throughout life. Moreover, educators of the gifted are active and resourceful in seeking to understand how language, culture, and family background interact with an individual's predispositions to impact academic and social behavior, attitudes, values, and interests. The understanding of these learning differences and their interactions provides the foundation upon which educators of the gifted plan instruction to provide meaningful and challenging learning.

### GT3K1

#### Influences of diversity factors on individuals with gifts and talents.

##### Research-based References

Benbow, C. P, Lubinski, D., Shea, D. L., & Eftekhari-Sanjani, H. (2000). Sex differences in mathematical reasoning ability at age 13: Their status 20 years later. *Psychological Science*, 11, 474-480.

Reported is the 20-year follow-up of 1,975 mathematically gifted adolescents whose assessments at age 12-14 yrs revealed robust gender differences in mathematical reasoning ability. Both sexes became exceptional achievers and perceived themselves as such; they reported uniformly high levels of degree attainment and satisfaction with both their career direction and their overall success. The earlier sex differences in mathematical reasoning ability did predict differential educational and occupational outcomes. The observed differences also appeared to be a function of sex differences in preferences for a) inorganic versus organic disciplines and b) a career-focused versus more-balanced life.

Garrison, L. (1993). Professionals of the future: will they be female? Will they be ethnically diverse? *Roeper Review*, 15, 161-164.

The sample in this study consisted of 454 gifted students in the ninth through eleventh grades. Gifted females enrolled in advanced level classes more often than gifted males. Enrollment patterns in advanced level classes also varied widely across ethnic groups with Asian American and European American students enrolling in over half of the advanced level classes and Hispanic and Native Americans enrolling in the fewest number of advanced classes. While there were no differences in ability among all of the ethnic groups, Hispanic and Native Americans had the lowest GPAs. The authors conclude that support needs to be provided to these minority groups throughout their education to encourage them to take challenging courses and be successful.

Good, C., Aronson, J., & Inzlicht, M. (2003). Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat. *Journal of Applied Developmental Psychology*, 24, 645-662.

Research on "stereotype threat" suggests that gender and race gaps in achievement may be partly due to stereotypes that impugn the math abilities of females and the intellectual abilities of Black, Hispanic, and low-income students. A field experiment was performed with 7<sup>th</sup> grade students to test methods of helping female, minority, and low-income adolescents overcome the anxiety-inducing effects of stereotype threat and, consequently, improve their standardized test scores. Results showed that females in experimental conditions earned significantly higher math standardized test scores than females in the control condition. Similarly, the students - who were largely minority and low-income adolescents - in the experimental conditions earned significantly higher reading standardized test scores than students in the control condition. (adapted from the journal).

Peterson, J. S., & Rischar, H. (2000). Gifted and gay: A study of the adolescent experience. *Gifted Child Quarterly*, 44, 231-246.

This exploratory and mostly qualitative study examined the adolescent experience of 18 high-ability gay, lesbian, or bisexual (GLB) individuals (aged 18-25 yrs), through a retrospective look at school and family experiences from grades 5-12, in order to better understand the development of gifted GLB adolescents. In narrative responses to an extended questionnaire, the results show significant themes of danger,

isolation, depression, and suicidal ideation, together with high achievement and extreme involvement in activities. Participants described personal responses to wondering about sexual orientation, being convinced, and eventually coming out, and the effects on school and family relationships. Half reported awareness by the end of elementary school, and almost all were convinced by grade 11. Suggestions for educators have implications for staff development. A copy of the questionnaire used in this study is appended. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

Piirto, J. (1998). Themes in the lives of successful contemporary U.S. women creative writers. *Roeper Review*, 21, 60-70.

Studied the lifespan development of 80 contemporary female US creative writers. Themes analyzed were characterized by (1) unconventional families and family traumas; (2) nurturing of talents by teachers and mentors; (3) extensive early reading and writing; (4) using writing as communication and auto-therapy; (5) residence in New York City at some point; (6) attendance at prestigious colleges, majoring in English literature; (7) continued high achievement (8) conflict combining motherhood and careers in writing; (9) history of divorce; (10) core personality attributes; (11) incidence of depression and/or self-destructive acts; (12) feeling of being an outsider, of marginalization (13) possession of tacit knowledge; (14) a personal and ritualized creative process and (15) societal expectations of femininity incongruent with their essential personalities.

Reis, S., Neu, T., & McGuire, J. (1995). Talents in two places: Case studies of high ability students with learning disabilities who have achieved. Research Monograph 95114. Storrs, CT: National Research Center on the Gifted and Talented

Extensive interviews were conducted with 12 young adults with learning disabilities who were successful at the college level, as well as with their parents, along with a thorough review of available school records. Most of the participants had been identified as having a learning disability late in their academic careers, suggesting their high ability may have masked some manifestations of learning disability. Reports of positive school experiences primarily centered around individual teacher support. Students reported many negative school experiences such as social problems, difficulty with teachers, and frustration with certain academic areas. Parents often reported that school systems "did not know what to do" with their children. However, students recalled very positive out-of-school experiences which enabled them to survive and constructively adapt their negative school experiences, resulting in positive personal attitudes. Positive personal characteristics in this group included high motivation, a high level of "task commitment," perseverance, and endurance. (Author abstract)

Vespi, L., & Yewchuk, C. (1992). A phenomenological study of the social/emotional characteristics of gifted learning disabled children. *Journal for the Education of the Gifted*, 16, 55-72.

A series of interviews was conducted with four gifted learning disabled boys ages nine to twelve, their parents and their teachers. These themes emerged from an analysis of the data. Most of the children demonstrated positive social skills in the classroom; however, they did appear to have difficulty in establishing and maintaining friendships. Differences were noted among individual characteristics with variations noted in attitudes toward families and in behavior. Overall, the students expressed generally positive feelings of self-image and self-confidence; however, they are frustrated with their underachievement and are afraid of failure. The authors offer these suggestions to educators: effectively identify students who are both LD and gifted; incorporate social/emotional needs into the IEP; foster positive interactions with peers; teach cognitive and behavioral coping skills; educate parents, and treat the whole child.

### **Literature/Theory-based References**

Artiles, A. J., & Zamora-Duran, G. (Eds). (1997). *Reducing disproportionate representation of culturally diverse students in special and gifted education*. The Council for Exceptional Children: Arlington, VA.

This book discusses the disproportionate representation of students from minority backgrounds in special education and gifted classes, and presents strategies that practitioners can use to better address the educational needs of all students. Chapter 1 provides an outline of the problem of student placement, disproportionate representation, and misclassification. Chapter 2 criticizes traditional standardized assessment approaches that disregard students' prior knowledge and cultural differences and proposes

the use of performance assessment approaches. In chapter 3, the cultural influences on student behavior are discussed as well as the need for educators to be aware of the role of cultural meaning underlying human behavior. Chapter 4 presents guidelines for educators to use to assess students' language proficiency in order to decide whether a more comprehensive assessment or a pre-referral intervention is needed. Chapter 5 discusses the under representation of children from minority backgrounds in gifted education and presents alternative assessment procedures. The final chapter provides a summary of recommended practices to address the problem of disproportionate representation. (ERIC abstract).

Esquivel, G. B., & Houtz, J. C. (Eds.).(2000). *Creativity and giftedness in culturally diverse students. Perspectives on creativity*. Cresskill, NJ: Hampton.

The 11 chapters in this text address issues concerned with identification and educational intervention with gifted students who are from culturally diverse backgrounds. Chapters have the following titles and authors: (1) "The Culturally and Linguistically Diverse School Population in the United States"; (2) "Culturally Diverse Gifted Students: A Historical Perspective"; (3) "Learning Styles and Creativity in Culturally Diverse Children"; (4) "Social and Emotional Characteristics of Gifted Culturally Diverse Children"; (5) "Bilingualism and Creativity"; (6) "Multicultural Issues in the Testing of Abilities and Achievement"; (7) "Identifying Gifted and Creative Linguistically and Culturally Diverse Children"; (8) "Educating the Culturally Diverse Child: An Integrative Approach"; (9) "The Quintessential Features of Gifted Education as Seen from a Multicultural Perspective"; (10) "Parents of Gifted Culturally Diverse Youngsters"; and (11) "Evaluation of Gifted and Talented Programs". (ERIC abstract).

Kitano, M. K., & Espinosa, R. (1995). Language diversity and giftedness: Working with gifted English language learners. *Journal for the Education of the Gifted*. 18, 234-254.

Summarizes the literature on the education of gifted students with primary languages other than English or English language learners and suggests guidelines for practice. Characteristics and identification of these students are discussed. The adaptation of traditional identification models (e.g., recognition and referral) is described, and new strategies for identification (including alternative constructs of giftedness) are discussed. Service delivery, instructional methods, and community involvement for gifted English language learners are also discussed.

Ogbu, J. (1995). *Understanding cultural diversity and learning*. (Chapter 32 in the "Handbook of Research on Multicultural Education," pp, 582-83) ERIC Document Reproduction Services No. ED382727)

The author contends that to understand what it is about minority groups, their cultures, and languages that makes crossing boundaries difficult, it is necessary to understand that there are different types of minority groups. Comparative study has resulted in the classification of minority groups as autonomous (minorities primarily in a numerical sense, such as Jews or the Amish), immigrant or voluntary, and caste-like or involuntary minorities. Primary cultural differences, differences that existed before the minority and majority came in contact, distinguish voluntary minorities, but secondary cultural differences, arising after two groups came in contact, distinguish the involuntary minorities. Understanding the situation of involuntary minority children is imperative in designing education that will meet their needs.(ERIC abstract).

### Practice-based References

Cline, S. (2001). Gifted children with disabilities. Overcoming stereotypes. *Gifted Child Today*, 24, 16-24

The article deals with the under identification and under inclusion of individuals who are disabled *and* gifted. Through case studies, the author details the roles which parents, school personnel and society can play to supported gifted children with disabilities. She concludes: "Experts in gifted education and special education should collaborate on behalf of gifted students with disabilities. Educators can establish a vision in which technological, financial and human resources support the development of their students. An articulated vision of the possibilities, for these children should be shared with and supported by school personnel and community groups. Progress needs to be monitored, and ongoing support provided."

Robinson, S. M. (1999). Meeting the needs of students who are gifted and have learning disabilities.

*Intervention in school and clinic, 34, 195-204.*

Describes the characteristics of gifted students with learning disabilities and discusses how teachers can rethink the classroom environment and provide enrichment, structure, and remediation to address the needs of these twice exceptional learners. The need for collaboration among professionals with varied expertise is emphasized. (Author abstract).

Stormont, M., Stebbins, M. S., & Holliday, G. (2001). Characteristics and educational support needs of underrepresented gifted adolescents. *Psychology in the Schools, 38, 413-423.*

Presents the characteristics and needs of adolescent students who are underrepresented in gifted programs. Addresses the specific populations of young women, students with learning disabilities, and students living in poverty. Presents the academic and social-emotional needs of students from underrepresented populations, followed by strategies professionals can use to support these students. (ERIC abstract).

Vespi, L., & Yewchuk, C. (1992). A phenomenological study of the social/emotional characteristics of gifted learning disabled children. *Journal for the Education of the Gifted, 16, 55-72.*

A series of interviews was conducted with four gifted learning disabled boys ages nine to twelve, their parents and their teachers. These themes emerged from an analysis of the data. Most of the children demonstrated positive social skills in the classroom; however, they did appear to have difficulty in establishing and maintaining friendships. Differences were noted among individual characteristics with variations noted in attitudes toward families and in behavior. Overall, the students expressed generally positive feelings of self-image and self-confidence; however, they are frustrated with their underachievement and are afraid of failure. The authors offer these suggestions to educators: effectively identify students who are both LD and gifted; incorporate social/emotional needs into the IEP; foster positive interactions with peers; teach cognitive and behavioral coping skills; educate parents, and treat the whole child.

### **Standard 3: Individual Learning Differences**

#### **GT3K2**

#### **Academic and affective characteristics and learning needs of individuals with gifts, talents, and disabilities.**

#### **Research-based References**

Baum, S. M., Olenchak, F. R. (2002). The alphabet children: GT, ADHD, and more. *Exceptionality, 10, 77-91.*

Many bright students demonstrate behaviors that are indicative of more than 1 diagnosis. Over time we see the birth of the "alphabet child" whose diagnoses include multiple disorders such as attention deficit hyperactivity disorder (ADHD) and learning disabilities (LDs), as well as G/T (gifted/talented). The multiple labels often blur who the child is and disguise appropriate educational needs. In addition, despite the large number of publications on attention problems, few have addressed the coincidence of ADHD with giftedness and creativity. This article explores this dilemma through a case study of an 8-yr-old boy diagnosed as G/T with ADHD, mild opposition defiant disorder, generalized anxiety disorder, and a mild LD. The problems that occur when teams do not consider behavioral characteristics from a multidisciplinary perspective are explored. Guidelines are suggested for careful diagnosis and a diagnostic matrix is offered for interpreting behavior.

Bouchet, N. & Falk, R. (2001). The relationship among giftedness, gender, and overexcitability. *Gifted Child Quarterly, 45, 260-261.*

This study examines the relationship among giftedness, gender, and overexcitability. Previous studies

examining these relationships were based on an open-ended questionnaire and small samples. This study uses a new self-rating questionnaire to assess overexcitabilities, the Overexcitability Questionnaire II, and findings are based on a large sample of 562 university students. Giftedness was measured by a student's participation in either a gifted, advanced, or standard curriculum program. Results show that previous findings on the relationship between giftedness and overexcitability can be confirmed; gifted students scored significantly higher on intellectual and emotional overexcitability than students in either of the other two programs. Further, males scored higher overall on intellectual, imaginal, and psychomotor overexcitability, while females scored higher on emotional and sensual overexcitability. Author's Abstract: COPYRIGHT 2001 National Association for Gifted Children.

Kerr, B., & Kurpius, S. (2004). Encouraging talented girls in math and science: Effects of a guidance intervention. *High Ability Studies*. 15, 85-102.

Although gifted girls are closing the gap in math and science achievement, they continue to lose interest and drop out of math/science careers. An intervention was developed for talented at-risk young women that emphasized enhancing career identity and exploration, building science self-efficacy and self-esteem and reducing risky behaviors. Self-esteem, school self-efficacy, and future self-efficacy increased from pre-test to the 3- to 4-month follow-up. Girls significantly increased their seeking information about career and were likely to stay with nontraditional choices. The risk factor suicidality also decreased over this period. (from the journal).

Neihart, M., Reis, S., Robinson, N., & Moon, S. (Eds.) (2002). *The social and emotional development of gifted children: What do we know?* Waco, TX: Prufrock Press.

This book offers an examination of the topics teachers, parents, and researchers need to know about the social and emotional development of gifted children. It includes chapters on peer pressure and social acceptance, resilience, delinquency, and underachievement, and summarizes several decades worth of research on special populations, including minority, learning-disabled, and gay and lesbian gifted students. The organization of this book follows a four-section outline: section one, issues deriving from students' advancement compared with age peers and from internal unevenness in development; section two, common areas of psychological response; section three, groups of gifted children and youth with special needs; and section four, promising practices and interventions.

VanTassel-Baska, J., Johnson, D., & Avery, L.D. (2002). Using performance tasks in the identification of economically disadvantaged and minority gifted learners: Findings from Project STAR. *Gifted Child Quarterly*, 46, 110-123.

Examined the ability of performance assessment tasks developed by Project STAR to identify economically disadvantaged and minority-gifted students. 1,792 3rd-6th-grade students residing in South Carolina completed various verbal and non-verbal tasks concerning gifted abilities. Results show that Project STAR identified an additional group of students who were 12% African American and 14% low-income children during the field test of the instrument, who would not have qualified for gifted programs using traditional measures.

### Literature/Theory-based References

Brody, L. & Mills, C. (1997). Gifted children with learning disabilities: A Review of the issues. *Journal of Learning Disabilities*, 30, (3), pp.282-286

Many people have difficulty comprehending that a child can be gifted and also have learning disabilities. As a result, children with special needs that result from both their high abilities and their learning problems are rarely identified and are often poorly served. This article explores the current policies and practices with regard to defining, identifying, and educating this population. Recommendations are included that would help ensure that students who are gifted and have learning disabilities receive the intervention needed to help them achieve their full potential. (Author abstract)

Castellano, J. A., & Pinkos, M. (2005). A rationale for connecting dual language programs with gifted education. In V. Gonzalez & J. Tinajero (Eds). (2005). *Review of research and practice, Vol 3.* (pp. 107-

124). Mahwah, NJ: Lawrence Erlbaum Associates.

The purpose of this article is to offer a rationale for connecting dual language programs with gifted education. Because both programs share common characteristics and the caliber of students also exhibit parallel levels of intelligence and verbal/linguistic strengths the collaboration between the two categorical entities seems to make sense. It is a logical evolution in this age of bridge building coalitions, particularly in light of cost-cutting measures that are currently impacting schools across the country. Furthermore, bilingual dual language programs specific to the School District of Palm Beach County, Florida will be examined; gifted education program models will be reviewed; and the connection between the two will be presented

Grantham, T. C., & Ford, D.Y. (2003). Beyond self-concept and self esteem: Racial identity and gifted African American students. *High School Journal*, 87, 18-29.

While it is recognized that self-concept and self-esteem affect the academic achievement of students, few publications have focused on the affective and psychological needs of students who are gifted and ethnically or culturally diverse. In this article, we extend the discussion of self-concept and achievement by focusing on how racial identity development affects the achievement of gifted African American students. We argue that few efforts, designed to improve gifted Black students' achievement and social-emotional well-being, will be successful until educators focus specifically on their racial identity. While we acknowledge that a focus on racial identity is necessary for all African American students, we are most concerned in this article with gifted Black students because so few have been identified as gifted. Along with describing racial identity development and issues facing gifted African American students, we offer solutions for change.

Greene, M. (2003). Gifted adrift? Career counseling of the gifted and talented. *Roeper Review*, 25, 66-72

The author concludes the article thus: "Inadequate career services have left many of our gifted and talented students adrift, forcing them to tread water until a flotation device passes by or to learn on their own to swim to the nearest shore. Our society loses potential contributions and many gifted and talented individuals continue to be anxious, confused, or frustrated about their career decisions. It is time to equip our diverse gifted population with a lifeboat of appropriate and interconnected counseling services, including a lifelong approach to career counseling that emphasizes career education, personal responsibility for decision making, and continual awareness of and adaptation to changes in self, in career, and in life". She makes a strong case for differentiated counseling, taking into consideration the individual's level and type of giftedness, sexual orientation, ethnicity, gender, religion, language and culture.

Kirschenbaum, R. J. (2004). Dynamic assessment and its use with underserved gifted and talented populations. In A. Baldwin, & S. Reis (Eds). (2004). *Culturally diverse and underserved populations of gifted students. Essential reading in gifted education.* (pp. 49-62). Thousand Oaks, CA: Corwin Press, Inc.

This reprinted article originally appeared in *Gifted Child Quarterly*, 1998, 42, 140-147. A relatively new, nontraditional approach to assessing cognitive ability is to instruct students on how to perform on certain tasks and then measure their progress in learning to solve similar problems. This approach, called dynamic assessment, usually consists of a test-intervene-retest format that focuses attention on the improvement in student performance when an adult provides mediated assistance on how to master the testing task. The dynamic assessment approach can provide a means for assessing disadvantaged, disabled, or limited English proficiency students who have not demonstrated high ability on traditional tests of intelligence and creativity. Dynamic assessment methods should be considered by school districts with large numbers of disadvantaged students which are dissatisfied with the effectiveness of traditional methods for identifying students for specialized enrichment programs.

Lovecky, D. (2003). *Gifted children with AD/HD*. ERIC Clearinghouse on Disabilities and Gifted Education, Reston, VA. ERIC Document Reproduction Services No. ED439555)

This brief paper on gifted children with attention deficit hyperactivity disorder (AD/HD) focuses on the

special educational needs of this population. Emphasis is on four major conclusions: (1) gifted children with AD/HD differ from average children with AD/HD in cognitive, social, and emotional variables (e.g., the gifted child is likely to show high level functioning in at least one academic area and is more likely to show developmental asynchrony); (2) gifted children with AD/HD differ from other gifted children (e.g., they have more difficulty completing work assignments and lack behavioral self-control); (3) assessment of gifted children needs to be done by those knowledgeable about both giftedness and AD/HD (e.g., misdiagnosis is likely and such children need to be evaluated in comparison with gifted peers in a stimulating environment); and (4) recommendations about Individualized Education Program or Section 504 planning need to consider both AD/HD problems and the effects of being gifted (e.g., these children may need acceleration at the same time they need to learn metacognitive skills to support more advanced achievement. (ERIC abstract).

Mendaglio, S. (1995). Sensitivity among gifted persons: A multi-faceted perspective. *Roeper Review* 17, 69-72.

A review of literature on sensitivity as an affective characteristic of gifted persons is presented. A multifaceted approach to sensitivity is proposed, conceptualizing it as consisting of cognitive and affective dimensions of both interpersonal and intrapersonal sensitivity. The psychological concepts of self-awareness, perspective taking, emotional experience, and empathy are used to elaborate on the model. (Author abstract).

*Relating life-span research to the development of gifted and talented children.* Abstracts of Selected Papers [from] The Annual Esther Katz Rosen Symposium on the Psychological Development of Gifted Children (3rd, Lawrence, Kansas, February 19-20, 1993).

This monograph presents abstracts of 29 papers that relate life-span research to the development of gifted and talented children. Sample topics include: attitudes about rural schools and programs for the gifted; social competence, self-esteem, and parent-child time and interaction in an advantaged subculture; helping families of gifted children interact with schools; determinants of underachievement among gifted and nongifted black students; differentiated assessment of self-concept: understanding the diversity and growth of talent in creative domains; the long-term development of giftedness and high competencies in children enriched in language during infancy; the power gamesmanship tactics of emotionally disturbed gifted children: four case studies, comparison of narrative language abilities in gifted/learning disabled and high-achieving gifted students; the Simon's Rock early college program; early mentor relationships in the lives of eminent and creative adults; families of the gifted; social giftedness; early influences in the development of artistic talent; implications for females of male conceptions of abilities; second language learning and gifted children; and verbal giftedness and the development of relativistic thinking. (ERIC abstract)

### Practice-based References

Delisle, J. & Galbraith, J. (2002). *When gifted kids don't have all the answers: How to meet their social and emotional needs.* Minneapolis, MN: Free Spirit Publishing.

This book focuses on ways teacher can support the social and emotional needs of gifted students. The next chapter considers emotional dimensions of giftedness such as super sensitivity and perfectionism as well as the special needs of gifted girls, gifted students from ethnic and cultural minorities, and gifted children with physical and learning differences. The fourth chapter considers the role of teacher of the gifted and offers strategies for creating a supportive classroom environment. Chapter 5 examines the difference between self-image and self-esteem and specific issues gifted children and adolescents face that set them apart. Underachievement is addressed in the sixth chapter and is distinguished from "selective consumerism." Chapter 7 offers a series of group discussions to help students explore and understand the "eight great gripes of gifted kids." The final chapter considers ways to create a classroom in which gifted students feel welcome, wanted, and able to be themselves. Throughout, the book offers first-person stories, classroom-tested activities, and suggested resources. (ERIC abstract).

Dole, S. (2000). The implications of the risk and resilience literature for gifted students with learning disabilities. *Roeper Review*, 23, 91-96.

Discusses the characteristic of resiliency in relation to gifted children with learning disabilities. Gifted

children have many characteristics in common with individuals who are considered resilient, including verbal ability, intelligence, an internal locus of control, risk-taking, high self-concept, good self-efficacy, and self-understanding. Individuals with learning disabilities are at high risk of failure because of the common problems of underachievement, high dropout rates, low self-esteem, emotional problems, a lack of social skills, underemployment, job difficulties, and prolonged dependence on others. In the case of gifted students with learning disabilities, early identification of the learning disability is crucial. Effective programming has demonstrated positive results, and counseling is important in addressing affective needs. Extracurricular activities and jobs nurture abilities and develop self-esteem. Parental and external supports provide emotional support and foster self-esteem. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

Emerick, L. J. (1992). Academic underachievement among the gifted: Students' perceptions of factors that reverse the pattern. *Gifted Child Quarterly*, 36, 140-146.

This study investigated factors that reversed the underachievement pattern in 10 gifted students, ages 14 to 20 who moved from chronic underachievement to academic success. After the identification of the subjects, data were collected from written responses to open-ended questionnaire and one to three in-depth interviews. Six factors were identified by the students as having a positive impact on their academic performance: out-of-school interests; parents who approved of the out-of-school interest and maintained a positive attitude toward them; classes that were challenging, encouraged discussion, and provided opportunities for independent study in areas of interest; academic goals; actions and respect for a particular teacher; and self confidence and a desire for academic success.

Ford, D. & Thomas, A. (1997). *Underachievement among gifted minority students: problems and promise* ERIC Digest E544, ERIC Clearinghouse on Disabilities and Gifted Education, Reston, VA.

The majority of articles and studies on gifted minority students have focused on issues of identification, primarily because some minority groups of gifted learners, particularly Black, Hispanic American, and Native American, have been underrepresented in gifted programs. These students may be underrepresented by as much as 30 to 70%, with an average of 50% (Ross, et al., 1993). While there is a clear need to increase the participation of minority students in gifted education programs, there is an equally important need to focus on issues of achievement and underachievement. This digest discusses factors affecting the achievement of gifted minority students, with particular attention to Black students. Problems associated with underachievement definitions and the influence of social, cultural, and psychological factors on student achievement are discussed. Suggestions and recommendations for reversing underachievement among gifted minority students are presented.

Hughes, L. (1999). Action research and practical inquiry: How can I meet the needs of the high-ability student within my regular education classroom? *Journal for the Education of the Gifted*, 22, 282-297.

Using data collected from student questionnaires, parent interviews, classroom observations, and teacher-student portfolio conferences, this fourth grade teacher-identified activities for her high-ability students: differentiated instruction, student choice, flexible groupings, and mixed enrichment with acceleration. The teacher reported that using these strategies, students were not doing the same thing, were not "stuck" in the same group all year, were able to make choices that matched their interests and abilities, enjoyed enrichment and acceleration, and reported a positive classroom atmosphere.

Thraikill, C. (1998). Patrick's story: A gifted learning disabled child. *Gifted Child Today*, 21, 24-25.

The mother recounts her son's educational career with testing results which identified him as both a gifted and learning disabled. His difficulties in school and eventual successful completion of college and employment are recounted. The need for schools to meet the needs of unconventional learners is stressed. (ERIC abstract).

### Standard 3: Individual Learning Differences

#### GT3K3:

#### Idiosyncratic learning patterns of individuals with gifts and talents, including those from diverse backgrounds.

#### Research-based References

Dunn, R., Griggs, S. A., & Price, G. (1993). The learning styles of gifted and talented adolescents in the United States. In R. Dunn, R. Milgram & G. Price (Eds.) *Teaching and counseling gifted and talented adolescents: An international perspective*. (pp.119-136). Praeger Publishers.

This chapter reports the research findings on the learning styles of US gifted and non-gifted students in grades 7 to 12. The two instruments used were the Learning Style Inventory (Dunn, Dunn & Price, 1989) and the Tel Aviv Activities Inventory. What is most valuable is their report of learning style preferences by specific domains. Learning preferences of those creative and noncreative in music, dance and art are compared as are those of students gifted in science and literature. They also summarized the learning preferences of creative and noncreative students according to four stimuli: environmental, emotional, sociological and physiological.

Johnson, N. (1994). Understanding gifted underachievers in an ethnically diverse population. ERIC Document Reproduction Services No. ED368101)

Gifted underachievers (n=108) were compared to gifted high achievers (n=96). All children had Wechsler Intelligence Scale for Children - Revised (WISC-R) IQ scores of 130 or greater, but underachievers were performing at or below the 50th percentile in at least one major area of achievement, whereas high achievers were at the 96th percentile or greater in three areas of achievement: language, math, and reading. Results of analysis of variance of achievement level X WISC-R subtests revealed significant differences in scores on four verbal subtests: Information, Similarities, Vocabulary, and Comprehension. High achievers had significantly higher verbal, but not performance, IQ scores than underachievers. However, comparison of the verbal IQ-performance IQ discrepancy distributions for the two groups revealed no significant differences, negating the idea that a large verbal/performance IQ discrepancy can be used as an indicator of risk for low achievement in gifted children. Analysis of gender, ethnicity, and risk revealed a greater concentration of non-Caucasian males with at least two risk factors in the underachieving group. Present findings are consistent with earlier findings concerning the importance and discriminating power of the Information subtest in distinguishing high versus underachievers. The findings indicate that gifted underachievers are not as motivated or interested in acquiring traditional factual information as high achievers. (ERIC abstract).

Melear, C. T., & Alcock, M. W. (1999). Learning styles and personality types of African American children: Implications for science education. *Journal of Psychological Type*, 48, 22-33.

Assessed type preferences for African American high school students (HSSs); identified learning style differences between minority and majority high school males; compared the learning style preferences of 204 male African American HSSs to the learning style preferences of 331 male Howard University students; and compared the learning style preferences of 6th- and 11th-grade African American students. The African American high school males were compared to the predominantly White MBTI norm group of 3,503 HSSs. All HSSs responded to the Myers-Briggs Type Indicator (MBTI) Form G, whereas the 6th graders responded to the Murphy-Meisgeier Type Indicator for Children. This study showed learning style differences among African American youth and White male students; additionally, the learning styles of African Americans were shown to have more heterogeneity than has been previously reported. Sixth graders were more likely to prefer Feeling than 11th graders. African American HSSs showed preferences for Sensing/Thinking and Sensing/Perceiving. Perceiving was preferred among HSSs in comparison with the N. Levy et al study (1972) of Howard University students. Implications for science teaching at the elementary through college levels are discussed.

Pryyt, M. C., Sandals, L. H., & Begoray, J. (1998). Learning style preferences of gifted, average- ability, and special needs students: A multivariate perspective. *Journal of Research in Childhood Education*, 13, 71-76.

Compared learning-style preferences of intellectually gifted, average-ability, and special-needs students on the Learning Style Inventory. Also examined the general differences among ability level and gender. Analyses indicated that gifted students preferred learning alone, being self-motivated, and using tactile learning approaches, and that males preferred peer-oriented learning situations. (Author abstract).

Sak, U. (2004). A synthesis of research on psychological types of gifted adolescents. *Journal of Secondary Gifted Education*, 15, 70-79.

In this study, the author synthesizes results of studies about personality types of gifted adolescents. Fourteen studies were coded with 19 independent samples. The total number of identified participants in original studies was 5,723. The most common personality types among gifted adolescents were "intuitive" and "perceiving." They were higher on the Introversion, Intuition, Thinking, and Perceiving dimensions of the personality scales of the Myers-Briggs Type Indicator (MBTI) when compared to general high school students. Also, gifted adolescents differed within the group by gender and by ability. Based on the findings, the author discusses teaching practices for gifted students according to their personality preferences. (Abstract from the journal).

Sternberg, R. J., Torff, B., Grigorenko, E. L. (1998). Teaching triarchically improves school achievement. *Journal of Educational Psychology*, 90, 374-384.

Two studies were conducted among 3rd-grade (primary-school) and 8th-grade (middle-school) students to test the efficacy of the triarchic theory of human intelligence as applied to classroom learning and performance. Students at the 3rd-grade level were taught a social-studies unit and at the 8th-grade level were taught a psychology unit in 1 of 3 ways: traditional instruction (primarily memory-based), critical-thinking instruction (primarily analytically based), and triarchically based instruction (involving infusion of analytical, creative, and practical instruction). Performance at both levels was assessed through multiple-choice items measuring primarily memory and performance-based items measuring analytical, creative, and practical aspects of achievement. Third-grade students also provided self-report measures. In general, triarchic instruction was superior to the other modes of instruction, even on multiple-choice memory-based items.

### **Literature/Theory-based References**

Barkan, J. H. & Bernal, E.M. (1991), Gifted education for bilingual and limited English proficient students. *Gifted Child Quarterly*, 35, 144-147.

Discusses the background of and rationale for bilingual gifted education and the efforts of the Tucson Unified School District to integrate bilingual education and education of the gifted. Steps identified as necessary to accomplish such integration include (1) the creation of identification systems that allow for a case study approach to analyze the educational needs of individual students and (2) the empowerment of language minority communities to participate actively in the educational interventions. Programming practices for the bilingual gifted learner also are described.

Milgram, M., Dunn, R. & Price, G.(2003). *Teaching and counseling gifted and talented adolescents: An international learning style perspective*. Greenwood Publishing.

This book provides theoretical and practical information to meet the challenge of individualizing instruction for gifted and talented adolescents of different learning styles and different cultural backgrounds. Part 1 consists of six chapters that present the broad theoretical background of giftedness and learning style. It includes the following papers: "Learning Styles of Gifted Students in Diverse Cultures" (Rita Dunn and Roberta M. Milgram); "Identifying Learning Styles and Creativity in Gifted Learners: Subjects, Instrumentation, Administration, Reliability, Validity" (Roberta M. Milgram and Rita Dunn); "Teaching Gifted Adolescents through Their Learning Style Strengths" (Rita Dunn); "Counseling Gifted Adolescents through Learning Style" (Shirley A. Griggs); "Giftedness, Creativity, and Learning Style: Exploring the Connections" (Donald J. Treffinger and Edwin C. Selby); and "Reaching Creatively Gifted Students through Their Learning Styles" (Mark A. Runco and Shawn Okuda Sakamoto). Part 2 presents data on the learning styles of gifted and talented learners in nine countries. The book ends with an overview and integrative summary, by Gary E. Price and Roberta M. Milgram, of the learning styles of gifted and talented learners in the countries studied, comparing cross-cultural differences and similarities. (ERIC

abstract)

Rogers, K. B. (2002). What else do you need to know about your gifted child? In *Reforming gifted education* (pp. 47-72). Scottsdale, AZ: Great Potential Press.

In this chapter, the author describes the objective and subjective sources of information that are important to create an accurate profile of a gifted child's capabilities. She also provides templates for parents to collect information about the personality characteristics, personal behaviors, child's interests and passions, and learning styles and preferences. This information will help one to create an effective education plan to meet the needs of the child.

Winzer, M. A., & Mazurek, K. (1998). *Special education in multicultural contexts*. Prentice Hall.

This book examines the impact of cultural and linguistic diversity on the learning of children with disabilities and giftedness, and explores multicultural education and the ways that multicultural perspectives can be taught to children with disabilities. Five major sections discuss: the foundations of multicultural education, multicultural education for students with special needs, pathways to learning, bridges to the curriculum, and ways to promote language and literacy. Chapter 6 deals with individual characteristics in learning styles, and Chapter 11 is on learning styles and instructional formats.

### Practice-based References

Renzulli, J. S., & Richards, S. (2000). *Addressing the needs of gifted middle school students. Practitioners' guide A0023*. (ERIC Document Reproduction Services No. ED456574)

This pamphlet discusses the benefits of using the Schoolwide Enrichment Model (SEM) for providing numerous enrichment and acceleration alternatives that are designed to accommodate the academic strengths, interests, and *learning styles* of all middle school students, including gifted students. It explains the different components of SEM including the Total Talent Portfolio, a vehicle for systematically gathering, recording, and using information about students' abilities, interests, and learning style preferences. Curriculum modification techniques that are used in the SEM are then described and include adjusting the pace and level of required material to accommodate variations in learning and providing enrichment and acceleration alternatives for students who have, or can, easily master regular material faster than the normal pace. The use of enrichment clusters for non-graded groups of students who share common interests and come together to pursue these interests during specially designated time blocks is also explained, along with types of enrichment clusters and cluster goals.

Subotnik, R. F., & Coleman, L. (1996). Establishing the foundations for a talent development school: Applying principles to creating an ideal. *Journal for the Education of the Gifted*, 20, 175-189.

A model Talent Development Program is described, designed to meet the atypical learning styles and needs of gifted students. Structural factors in conventional schools that are antithetical to talent development are discussed, and provisions for facilitating scholarly inquiry and apprenticeships for students are outlined. (Author abstract).

## Standard 3: Individual Learning Differences

### GT3K4:

**Influences of different beliefs, traditions, and values across and within diverse groups on relationships among individuals with gifts and talents, their families, schools, and communities.**

### Research-based References

Ablard, K. (1997). Self-perceptions and needs as a function of type of academic ability and gender. *Roeper Review*, 20, 110-115.

Some academically talented students are at risk for social problems because of negative self-image. A

study showed gifted students had higher academic self-concepts but approximately the same social self-concepts as other students. Academically talented females were more oriented to dominance, achievement and endurance, but lower needs for abasement and succorance than a normative female group. High verbal students may be at greater risk for problems in social adjustment.

Benbow, C. P., Zonderman, A. B., & Stanley, J.C. (1983). Assortative marriage and the familiarity of cognitive abilities in families of extremely gifted students. *Intelligence*, 7, 153-161.

12 females and 60 males (mean ages 13.5 and 15.1 yrs, respectively), who represented the top 1% of the extremely bright students identified by the Study of Mathematically Precocious Youth (C. P. Benbow and J. C. Stanley) were tested along with their parents, using a battery of specifically designed cognitive tests. These students represented the top 0.03% of their age group in intellectual ability. Results show that the parents were extremely able and resembled one another significantly more than parents in the general population. In addition, the intellectually precocious children resembled their parents to a lesser extent than children of average ability resemble their parents. These data suggest that considerable assortative mating has occurred among the parents of these extremely gifted youth, but that extreme giftedness cannot be predicted reliably solely as a result of the mating of bright parents.

Fernández, A. T., Gay, L. R., Lucky, L. F., & Gavilan, M. R. (1998). Teacher perceptions of gifted Hispanic limited English proficient students. *Journal for the Education of the Gifted*, 21, 335-351.

This study examined the relationship between teachers' ethnicities and the way they rated characteristics for gifted Hispanic LEP students and any gifted student. There were 373 teachers from Dade County Public Schools, Dade County, Florida who participated. Of this sample of teachers, 162 were Hispanic, 137 were White, and 74 were African American. Using the Survey on Characteristics of Gifted and Talented Hispanic Students (Marquez et al., 1992) and an adapted form that removed all of the characteristics that related specifically to Hispanic students, the researcher found similarities and differences in teacher perceptions. Teachers perceived the characteristics "is curious" as important across both groups; however, teachers rated "has a large vocabulary" and expresses himself/herself well orally" differently for the two groups. While teachers do not view artistic, musical, and kinesthetic abilities as important characteristics of giftedness, they view these as more favorably for gifted Hispanic LEP students. Stereotypic impressions may influence ratings of students. Some variation was found in ratings by African American and Hispanics who viewed "likes to study" and "does well in school" as more important characteristics of giftedness than Whites. The authors conclude that teachers tend to perceive language abilities as important characteristics of giftedness that may have negative implications for gifted Hispanic LEP students.

Peterson, J. S. (2002). A longitudinal study of post-high-school development in gifted individuals at risk for poor educational outcomes. *Journal of Secondary Gifted Education*, 14, 6-18.

Examined the subjective experience of post-high school development in 14 intellectually gifted late-adolescents at risk due to academic underachievement, depression, or family situation/conflict with parents. The 4-yr longitudinal study focused on 4 developmental tasks: gaining autonomy, becoming differentiated, establishing career direction, and developing a mature relationship. Assessments included the FACES III: Family Adaptability and Cohesion Evaluation Scales, the Family Satisfaction Scale, the Stress Scale for Couples, and a nonstandardized self-assessment questionnaire. The results show that the process of resolving conflict with parents generated the largest portion of narrative data. It is concluded that although the majority of participants still lacked direction and a mature relationship at the end of the study, most respondents had resolved conflict, felt autonomous, and reported good emotional health. Multiple task accomplishments were associated with being able to concentrate on academics. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

Renzulli, J., & Park, S. (2002). Giftedness and high school dropouts: Personal, family, and school related factors. RM02168). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Using NELS: 1998 data, this study was conducted to obtain more comprehensive information about gifted high school dropouts and to examine factors related to gifted dropout behavior. It was found that gifted dropouts were related to their family background as well as students' own educational aspirations.

## Literature/Theory-based References

Callahan, C. M. (1991). An update on gifted females. *Journal for the Education of the Gifted*, 14, 284-311.

Reviews selected literature on female achievement and presents data on high-ability females in an overview of the situation for gifted young women. Data on current achievement and aspirations as well as background and environmental factors influencing that achievement are presented as the background to a discussion of needed research and understanding. Specific performance data on aptitude and achievement tests are presented in contrast to data on grades. Career plans and aspirations are discussed in light of attitudes toward mathematics and science; beliefs and behaviors of parents and teachers; and past performance.

Hunsaker, S. (1995). Family influences on the achievement of economically disadvantaged students: Implications for gifted identification and programming. Research Monograph 95206. Storrs, CT: National Research Center on the Gifted and Talented.

This review of the literature looks at family influences on the achievement of economically disadvantaged youth, with an emphasis on relationships among families, academic achievement, and gifted education. Theoretical perspectives on the study of families have focused primarily on families as static systems and families as dynamic systems and, more recently, on families as interactive systems. Correlation between single parenting and low academic achievement has been found, though the presence of extended family members appears to overcome this problem in many instances, and processes that support academic achievement may also mediate this relationship. The importance of schools and communities in supporting families and the family culture is stressed. Studies specific to gifted education have found status variables that correlate directly with identification of students as gifted, and that indicate the importance of focusing on individual expressions of giftedness within cultural contexts when evaluating gifted students within economically disadvantaged families. (ERIC abstract)

Reis, S. M., & Renzulli, J. S. (2004). Current research on the social and emotional development of gifted and talented students: Good news and future possibilities. *Psychology in the Schools*, 41, 119-130.

A recent summary of research produced by a task force of psychologists and educational researchers associated with the National Association for Gifted Children and the National Research Center on the Gifted and Talented indicated that high-ability students are generally at least as well adjusted as any other group of youngsters. This research also found, however, that gifted and talented students can face a number of situations that may constitute sources of risk to their social and emotional development. Some of these issues emerge because of a mismatch with educational environments that are not responsive to the pace and level of gifted students' learning and thinking. Others occur because of unsupportive social, school, or home environments. In this article, current research about the social and emotional development of gifted and talented students is summarized and suggestions are made about strategies to enhance these students' school experiences. Suggestions are provided for assessment and educational programming based on students' strengths and interests that may result in helping talented students realize their potential.

Silverman, L. K. (Ed.). (1993). *Counseling the gifted and talented*. Denver: Love Publishing Company.

This edited volume delineates counseling and developmental strategies for a wide variety of populations of gifted students. Specific chapters focus on the emotional and social needs of learning disabled gifted, multicultural gifted, at risk students, families of gifted children and career guidance and group counseling with gifted students. The focus is on prevention rather than remediation.

Trotman, M. F. (2001). Involving the African American parent: Recommendations to increase the level of parent involvement within African American families. *Journal of Negro Education*, 70, 275-285.

Focuses on increasing African American parent involvement as a tactic to improve the school performances of African American children. The importance of parental involvement, emphasizing the areas of mandated parental involvement, achievement/behavior, and empowerment are discussed. Factors contributing to the lack of parental involvement as well as recommendations for increasing the levels of parental involvement are presented.

### Practice-based References

Radaszewski-Byrne, M. (2001). Parents as instructional partners in the education of gifted children, A parent's perspective. *Gifted Child Today*, 24, 32-42.

The author is a professional educator who has worked in various educational settings. In this article, she shares her personal experience parenting her gifted daughter. In her article, she also discusses the 'unanticipated secondary benefits to the school which resulted from the professional/parent partnership, and suggests alternative models of professional/parent partnerships. Although the circumstances surrounding her case might be unique, some of the things she did as an instructional partner can apply to other situations as well.

Solow, R. E. (1995). Parents' reasoning about the social and emotional development of their intellectually gifted children. *Roeper Review*, 18, 142-146.

Solow examined how 10 sets of parents reason about the social and emotional development of their gifted children. Trained researchers conducted interviews with all family members and made multiple observations of the children at home, in school and in community activities to determine the factors that contributed to or detracted from successful adjustment. Regardless of whether the parent used the gifted label, all of the families acknowledged that their children were exceptional in some area. Some of the parents felt that their children were socially well adjusted (able to make friends both in and outside the classroom); others perceived problems that related to their giftedness. They also identified prominent traits—adulthood, perfectionism, procrastination, and a low tolerance of frustration. The author concluded that some of the parents have no particular framework when talking about their children while others use an intellectual framework only; intellectual and partial social-emotional framework; and comprehensive framework that includes both intellectual and social/emotional. The author suggests that parents be provided more information about the social and emotional differences of their gifted children.

Terry, W. (2003). Effects of service learning on young, gifted adolescents and their community. *Gifted Child Quarterly*, 47, 295-308.

This study examines the effects of the Community Action service learning project, part of the Learn and Serve America program, on gifted adolescents and their community. Using a case study design, the author investigates this service-learning project grounded in creative problem solving. The importance of service learning to the participants is highlighted in the following themes that emerged from the data: instructional methodology, student development, attitudes, empowerment, commitment, and effects of celebration. A service learning typology based on levels of service and learning is referenced. The author examines connections to the Future Problem Solving Program and discusses the implications for further research, the education of the gifted, and the community.

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### Standard 3: Individual Learning Differences

#### GT3S1

**Integrate perspectives of diverse groups into planning instruction for individuals with gifts and talents.**

### Research-based References

Colangelo, N., Assouline, S. G., & Gross, M. U. M. (2004). *A nation deceived: How schools hold back America's students: The Templeton national report on acceleration* (Volumes 1). Iowa City, IA: University of Iowa, Belin-Blank Center.

In Volume 1, this report issues a wake-up call to America's schools on the need to provide accelerative options at every stage of development for gifted learners, using research evidence coupled with student vignettes of successful acceleration. The report argues convincingly for action on this key programming feature. In Volume 2 the argument for acceleration is further buttressed by actual data presented by researchers demonstrating its positive effects on the learning patterns of gifted students. (Abstract from

National Association for Gifted Children: [http://www.nagc.org/policy/pp\\_acceleration.html](http://www.nagc.org/policy/pp_acceleration.html).

Kitano, M. K., & Pedersen, K. S. (2002). Action research and practical inquiry: Multicultural-content integration in gifted education: Lessons from the field. *Journal for the Education of the Gifted*, 25, 269-289.

This article describes the attempt of 2 staff-development practitioners to understand--through practical inquiry--elementary and secondary teachers' multicultural goals and implementation experiences with gifted students in a diverse district. An informal survey of elementary, middle and high school teachers participating in an in-service course on gifted education suggested that many of these teachers had goals and experiences related to multicultural curricula for gifted children. Through the survey, teachers also identified obstacles they encountered in implementing multicultural activities and benefits they perceived. Teachers' stories describing their practice were gathered through observations, written reports, and videotapes. Findings offer several implications for guiding teachers' implementation of content related to diversity.

McIntire, J. A., & Plucker, J. A. (1995). Availability of extracurricular and cultural opportunities for rural middle level gifted students. *Rural Special Education Quarterly*, 51, 28-35

Two studies indicate that rural gifted students in Maine middle schools with gifted programs have greater extracurricular and cultural opportunities than those in schools without gifted programs, and in eight states, the level of opportunities available to gifted students does not differ between rural and suburban middle schools. However, opportunities and resources vary significantly among rural schools. (ERIC abstract).

Plucker, J. A. (1998). Gender, race, and grade differences in gifted adolescents' coping strategies. *Journal for the Education of the Gifted*, 21, 423-436.

The purpose of this study is to produce evidence of demographic effects, or the lack thereof, in gifted adolescents' coping in order to guide affective intervention efforts with this population. The Adolescent Coping Scale was administered to 749 gifted students attending two different summer enrichment programs. Results provide little evidence of gender or grade differences but suggest the presence of moderate racial differences.

### **Literature/Theory-based References**

Albert, R. S. (1996). What the study of eminence can teach us. *Creativity Research Journal*, 9, 307-315.

Presents a revised theory concerning the relation of eminence to productivity, its measurement, and the markers for it. The historical, systematic, and informational bases of families as ongoing systems are used for this revised theory, with the Bronte family being used for illustration. One important conclusion is that persons who are truly eminent (i.e., who create original and significant work), and persons who are simply high achievers, tend to come from different families. Another significant conclusion, which exemplifies the revised theory, is that gifted children may not change their families. In earlier work, gifted children had been described as organizers within families, but they may primarily organize families in terms of what the family wants and has already been doing. It may thus be best to describe families as ongoing systems. For gifted children, much that goes on within a family that will not change, includes a richness of talent.

Callahan, C. M., & Hiatt, E. L. (1998). Assessing and nurturing talent in a diverse culture: What do we do, what should we do, what can we do? In R. C. Friedman & K.B. Rogers (Eds). (1998). *Talent in context: Historical and social perspectives on giftedness*. (pp. 3-15). Washington, DC: American Psychological Association.

The authors trace the historical and cultural factors that have led the education establishment to ignore outstanding potential in the many subcultural groups that make up our society. Much of the blame, these authors assert, must be laid at the door of the testing movement and the narrow definitions of giftedness and talent it engendered. As an alternative to the current system of gifted education, Callahan and Hiatt envision schools of talent development, in which talent identification is based on authentic assessments of performance or production to find those with "expertise;" in which the procedures are inclusive, not exclusive; and in which all subcultural groups are equitably represented.

Gagné, F. (2004) Transforming gifts into talents: The DMGT as a developmental theory. *High Ability Studies*, 15, 119-147.

The Differentiated Model of Giftedness and Talent (DMGT) presents the talent development process (P) as the transformation of outstanding natural abilities, or gifts (G), into outstanding systematically developed skills which define expertise, or talent (T) in a particular occupational field. This developmental sequence constitutes the heart of the DMGT. Three types of catalysts help or hinder that process: (a) interpersonal (I) catalysts, like personal traits and self-management processes; (b) environmental (E) catalysts, like socio-demographic factors, psychological influences (e.g., from parents, teachers, or peers), or special talent development facilities and programs; and (c) chance (C). The DMGT includes a 5-level metric-based (MB) system to operationalize the prevalence of gifted or talented individuals, with a basic 'top 10 per cent' threshold for mild giftedness or talent, through successive 10 per cent cuts for moderate, high, exceptional and extreme levels. Complex interactions between the six components are surveyed. The text ends with a proposed answer to a fundamental question: 'What factor(s) make(s) a difference, on average, between those who emerge among the talented and those who remain average?'

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53, 106-116.

The specific components of this culturally responsive approach to teaching are based on research findings, theoretical claims, practical experiences, and personal stories of educators researching and working with underachieving minority students. Culturally responsive teaching is defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively. It is based on the assumption that when academic knowledge and skills are situated within the lived experiences and frames of reference of students, they are more personally meaningful, have higher interest appeal, and are learned more easily and thoroughly. As a result, the academic achievement of ethnically diverse students will improve when they are taught through their own cultural and experiential filters.

Matthews, P. H & Matthews, M. S. (2004). Heritage language instruction and giftedness in language minority students: Pathways toward success. *Journal of Secondary Gifted Education*. 15, 50-55.

Language minority students, while often underrepresented in traditional gifted programs, can benefit from "heritage language" courses focused on developing academic proficiency and exploring challenging content in their home language. We describe how heritage language courses can provide an appropriate venue for the identification of gifted potential among language minority students, how such courses can enhance student motivation for learning, and what cognitive benefits may be associated with additive bilingualism developed through such courses. (Journal abstract)

VanTassel-Baska, J. (2003). *Content-based curriculum for low income and minority gifted learners*. (RM03180). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph addresses planning and developing curricula for low income and minority gifted learners. Issues discussed include collaboration among professionals working with these students, choice of school program delivery models, involvement of parent and community support systems in nurturing potential, and curriculum interventions directed toward the needs and profiles of this population. Section I focuses on definitions of low income and minority groups as the terms relate to gifted and talented students, intervention strategies, and collaboration among professionals. Section II describes characteristics of low income and minority gifted learners, and Section III presents model interventions to be used with this population. Finally, new directions for future curriculum and program design for use with low income and minority gifted learners are discussed.

### **Practice-based References**

Baum, S. M., Renzulli, J. S., & Hébert, T. P. (1995). Reversing underachievement: Creative productivity as a systematic intervention. *Gifted Child Quarterly*, 39, 224-235.

Twelve teachers who received training in Renzulli's Enrichment Triad Model selected 17 students, ages 8-13, identified as gifted who were also underachieving in their school performance. Data from multiple sources were collected. The researchers found that a combination of factors contributed to the pattern of underachievement: emotional issues, social-behavioral issues, curricular issues and self-regulation. After

the intervention, most of the students were no longer underachieving in their school setting because of the (a) relationship with the teacher, (b) presentation of self-regulation strategies, (c) opportunities to work in an area of interest, (d) opportunities for interacting with an appropriate peer group; and (e) opportunities to learn about the issue of underachievement.

Belcher, R., & Fletcher-Carter, R. (1999). Growing gifted students in the desert: Using alternative, community-based assessment and an enriched curriculum. *Teaching Exceptional Children*, 32, 17-24.

Describes a federally funded Javits project that involved two rural elementary schools with a primarily Hispanic population. The project was designed to develop an alternative community-based assessment procedure for identifying gifted minority students. Identified students were taught using a developed science curriculum that focused on problem solving of futuristic scenarios. A number of resources are provided. (ERIC abstract)

Hébert, T. (2002). Educating gifted children from low socioeconomic backgrounds: Creating visions of a hopeful future. *Exceptionality*, 10, 127-138.

The stories of 3 students from low socioeconomic backgrounds highlight significant issues in educating gifted students living in poverty. Major themes uncovered across the 3 cases included educators who looked beyond the circumstances of the students and maintained high expectations, the positive influence of enriched teaching-learning opportunities and extracurricular activities, and the success of a mentoring approach with the students. Based on these findings, implications for educating children living in poverty are also discussed. The 3 students discussed are: (1) Jermaine, an African-American elementary school student from rural Alabama, (2) Jamison, a white elementary school student from rural Iowa, and (3) Claire, an African-American high school student from an impoverished urban community in Connecticut.

Jatko, B. P. (1995). Action research and practical inquiry: Using a whole class tryout procedure for identifying economically disadvantaged students in three socioeconomically diverse schools. *Journal for the Education of the Gifted*, 19, 83-105.

The article conducted research that aimed at addressing the identification and selection of economically disadvantaged gifted students for participation in the TAG Future Problem Solving program. An action research, whole-classroom approach was used to evaluate fourth grade students at three elementary schools (one affluent community, one lower-middle income community, and one extremely low income community) who had no previous experience with the Future Problem Solving program. Data were collected on student teams in the program to chart progress for each individual team, compare team performances from all schools, and compare the teams as a competitive sample. The author reflects that using the whole classroom tryout technique allowed her to observe and include gifted children in the program who otherwise would not have been recognized and would not have had access to the TAG program.

Weil, D. (1993). Towards a critical multicultural literacy: Advancing an education for liberation. *Roeper Review*, 15, 211-217.

Weil suggests that students need to learn how to think fair-mindedly and critically to be able to live in a complex world. He suggests that the curriculum should include learning about the perspectives of others, considering the strengths and weaknesses of opposing cultural and political view points, overcoming egocentric tendencies, and self examination. A critical multicultural literacy curriculum incorporates relevant problem-posing activities that address the diversity of the reality of everyday life and are based on three tenets: educational equity, reduction of prejudice, and reasoning multiculturally. This type of curriculum will support "a philosophy of critical literacy [that] will advance personal and social freedom" (p. 217).

Winebrenner, S., & Devlin, B. (1996). *Cluster grouping of gifted students: How to provide full-time services on a part-time budget*. ERIC Digest E538.

The work of Allan (1991), Feldhusen (1989), Fiedler (1993), Kulik and Kulik (1990), Rogers (1993) and others clearly documents the benefits of keeping gifted students together in their areas of greatest strength for at least part of the school day. It appears that average and below average students have much to gain from heterogeneous grouping, but we must not sacrifice gifted students' needs in our attempts to find the best grouping practices for all students.

If we do not allow cluster groups to be formed, gifted students may find their achievement and learning

motivation waning in a relatively short period of time. Parents of gifted students may choose to enroll their children in alternative programs, such as home schooling or charter schools. The practice of cluster grouping represents a mindful way to make sure gifted students continue to receive a quality education at the same time as schools work to improve learning opportunities for all students. (ERIC abstract)

Ford, D., & Grantham, T. (2003). Parenting gifted culturally diverse children: Focus on education-related issues and needs. *Understanding Our Gifted*, 15, 12-17.

After reviewing the needs of culturally diverse gifted students, the following recommendations are made: seek gifted programs that meet the dual needs of students who are gifted and diverse; encourage the hiring of culturally diverse teachers; expose children to diverse gifted mentors, and encourage school personnel to use multicultural materials (ERIC abstract).

Greenbaum, J., & Markel, G. (2001). *Helping adolescents with ADHD & learning disabilities: Ready-to-use tips, techniques, and checklists for school success*. (ERIC Document Reproduction Services No. ED457654)

This manual is intended to provide practical guidance to teachers of adolescents with attention deficit hyperactivity disorder (ADHD) and/or learning disabilities (LD) through specific techniques, teaching strategies, checklists, and student case histories. The 12 chapters address the following topics: (1) an overview of ADHD and LD including definitions, characteristics, dual and overlapping diagnoses, secondary problems, and common assessment instruments; (2) legal requirements of the Individuals with Disabilities Education Act and Section 504 of the Rehabilitation Act; (3) the learning environment (teaching philosophy, school climate, the physical environment, instructional methods and management); (4) reading and writing in the content areas; (5) teaching homework completion skills; (6) teaching adolescents to use self-management skills; (7) developing Individualized Education Programs and Section 504 plans; (8) behavioral interventions; (9) the role of medication; (10) gifted students with ADHD and/or LD; (11) diversity and parent involvement; and (12) transition to postsecondary settings (roles and responsibilities of school personnel and postsecondary options). Four appendices include lists of common classroom problems and intervention strategies, relevant organizations, resources, and World Wide Web sites. (ERIC abstract).

## Standard 4: Instructional Strategies

Educators of the gifted possess a repertoire of evidence-based curriculum and instructional strategies to differentiate for individuals with gifts and talents. They select, adapt, and use these strategies to promote challenging learning opportunities in general and special curricula and to modify learning environments to enhance self-awareness and self-efficacy for individuals with gifts and talents. They enhance the learning of critical and creative thinking, problem solving, and performance skills in specific domains. Moreover, educators of the gifted emphasize the development, practice, and transfer of advanced knowledge and skills across environments throughout the lifespan leading to creative, productive careers in society for learners with gifts and talents.

### GT4K1

**School and community resources, including content specialists, which support differentiation.**

#### Research-based References

Bloom, B. (1985). *Developing talent in young people*. New York, NY: Galantine Books.

Bloom studied successful young persons over a four year time period and found that school, community, and family support in a particular content field is necessary for talent development, especially for those students and young adults who attain high levels of achievement in a particular field before the age of 35.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology and discovery of invention*. New York: Harper Books.

In a study of eminent persons in specific talent domains, Csikszentmihalyi outlines the commonalities among those who create and attain in content fields. This attainment is due to personal motivation and drive, environment, prior opportunities and interests, and acceptance and mentoring in a content field.

Milgram, R.M., Hong, E., Shavit, Y.W., & Peled, R.W. (1997). Out-of-school activities in gifted adolescents as a predictor of vocational choice and work accomplishment in young adults. *The Journal of Secondary Gifted Education*, 8, 111-120.

This longitudinal study of out-of-school activities of gifted students indicated that leisure activities including home and community options may be a valid predictor of vocational choice in adulthood.

Olszewski-Kubilius, P. (1998). Research evidence regarding the validity and effects of talent search educational programs. *The Journal of Secondary Gifted Education*, 9, 134-138.

Research evidence suggests that middle school students who make an average score similar to those entering college are able to master advanced high school content in short summer courses and retain information beyond the end of the course.

#### Literature/Theory-based References

Gagné, F. (2003). Transforming gifts into talents: The DMGT as a developmental theory. In N. Colangelo & G. Davis (Eds). *Handbook of gifted education*. (3<sup>rd</sup> edition, pp. 60-74). New York: Pearson Education

Gagné's Differentiated Model of Giftedness and Talent illustrates the impact of environmental catalysts such as family, community, life events, and interests as well as natural catalysts such as student precocity and intelligence that impact life achievement, suggesting importance on providing community and family resources in a talent domain for precocious students.

Landrum, M. S. (2002). *Resource consultation and collaboration in gifted education*. Mansfield Center, CT: Creative Learning Press.

This book outlines the steps involved in providing collaborative partnerships with regular classroom teachers to better meet the needs of gifted students. Using the resource consultation model, trained teachers of the gifted collaborate with regular classroom teachers to provide differentiated instruction for gifted learners in the regular classroom.

Siegle, D. & McCoach, D. B. (2005). Extending learning through mentorships. In F. Karnes & S. Bean (Eds.) *Methods and materials for teaching gifted* (2<sup>nd</sup> ed, pp.473-518). Waco, TX: Prufrock Press.

A research base regarding the effectiveness of mentorships is outlined including the benefits of mentoring to mentees and mentors, alike. Procedural considerations for implementing mentorship programs in schools is thoroughly discussed including tips, caveats, and examples of a secondary mentorship program design. Accommodations for special populations and telementoring options are also included.

VanTassel-Baska, J. (2004). *Curriculum for gifted and talented students*. Thousand Oaks: Corwin Press.

A collection of seminal articles and research from *Gifted Child Quarterly*, are compiled in one volume including how to develop a scope and sequence for gifted, the multiple menu model of serving gifted students, what effective curriculum for the gifted looks like, curriculum at the secondary level, and specific content area curricula options in math and science.

### **Practice-based References**

Renzulli, J. (1994). *Schools for talent development*. Mansfield Center, CT: Creative Learning Press.

Above average ability, creativity, and motivation are described as the main ingredients for talent development within a field of study, as outlined by the Schoolwide Enrichment Model (SEM). The goals of SEM, and the organizational and service delivery components of the SEM are discussed including enrichment clusters, grouping, talent portfolios, curriculum modifications, and enrichment learning and teaching.

Sheffield, L. (2003). *Extending the Challenge in mathematics: Developing mathematical promise in K-8 students*. Thousand Oaks, CA: Corwin Press.

This book is a guide to the development of mathematical talent in students in grades K through 8. The first chapter is on developing mathematical promise and considers characteristics of students who are mathematically promising, the goals of mathematics instruction, how to find and/or create good problems, models for increasing the numbers and levels of mathematically promising students, and assessment strategies. The remaining chapters offer suggested investigations into the following subject areas: number and operations, algebra, geometry and measurement, and data analysis and probability. Investigations offer activities at three levels of difficulty and are based on an open problem solving heuristic.

Tomlinson, C. & Allan, S. (2000). *Leadership for differentiating schools and classrooms*. Alexandria, VA: Association of Supervision and Curriculum Development.

This guide describes how leaders can effectively and systemically provide the needed components for differentiating instruction and leading others in accommodating the needs of all learners in a school system or classroom, including the use of available resources, collaboration and content specialists. There is an emphasis on the skills of leadership and managing the needs of students while attempting to balance the mandates of standards and equity.

## Standard 4: Instructional Strategies

### GT4K2:

**Curricular, instructional, and management strategies effective for individuals with exceptional learning needs.**

#### Research-based References

Colangelo, N., Assouline, S., & Gross, M. (2004). *A nation deceived: How schools hold back America's brightest students (Vol. II)*. Iowa City, IA: University of Iowa, Belin Blank Center.

Interviewed years later, an overwhelming majority of accelerated students say that acceleration was an excellent experience for them. They feel academically challenged and socially accepted, and they do not fall prey to the boredom that plagues many highly capable students who are forced to follow the curriculum for their age-peers. In spite of rich research evidence, schools, parents, and teachers have not accepted the idea of acceleration? *A Nation Deceived* presents the reasons for why schools hold back America's brightest kids, and shows that these reasons are simply not supported by research.

Gallagher, S.A. & Stepien, W. (1996). Content acquisition in problem-based learning: Depth versus breadth in American studies. *Journal for the Education of the Gifted*, 19, 257-275.

One hundred sixty seven high school students' scores on multiple-choice standardized tests were compared after traditional and experimental instruction. In the experimental curriculum students used data and varying perspectives to resolve problems related to a variety of dilemmas such as the Salem witch trials, the use of the nuclear bomb on Hiroshima, and so on. Results indicated that students in problem-based learning classes did not sacrifice content acquisition in American Studies when compared to students learning in more traditional settings.

Kulik, J. A., & Kulik, C.C. (1992). Meta-analytic findings on grouping programs. *Gifted Child Quarterly*, 36, 73-77.

Meta-analytic reviews have shown that gifted students gain little from programs of minimal instructional modification (multilevel classes), more from greater modifications (cross-grade and within-class programs) and the most from those involving the greatest amount of curricular adjustment (enrichment and acceleration).

Lubinski, D. & Benbow, C.P. (1995). The study of mathematically precocious youth: The first three decades of a planned 50-year study of intellectual talent. In R. F. Subotnik, & K.D. Arnold (Eds). *Beyond Terman: Contemporary longitudinal studies of giftedness and talent*. (pp.255-289).Norwood, NJ: Albex.

This longitudinal study outlines a diagnostic-prescriptive talent development acceleration program in mathematics through Johns Hopkins University. Positive effects using this approach have been documented.

#### Literature/Theory-based References

Brody, .L. (2004). *Grouping and acceleration practices in gifted education*. Thousand Oaks: Corwin Press.

This volume of seminal articles on grouping and acceleration emphasize the importance of flexibility when assigning students to instructional groups, and modify the groups when necessary. Grouping and acceleration have proved to be viable tools to differentiate content for students with different learning needs based on cognitive abilities and achievement levels.

Davis, G. A., & Rimm, S. B. (2004). *Education of the gifted and talented*, (5<sup>th</sup> ed) Boston, MA: Allyn & Bacon.

The authors address crucial topics in the field, including strategies for identifying gifted students,

considerations in planning a sound gifted and talented program, and contemporary program models. Chapter 3 deals with the main components of program planning, scope and sequence in gifted programs, curriculum considerations, and legal issues in Gifted Education. Chapters 12 to 15 focus on culturally diverse, disadvantaged, underachieving, female, and disabled gifted students and crucial programming adjustments for them.

Karnes, F., & Bean, S. (2005) (Eds). *Methods and materials for teaching the gifted* (2<sup>nd</sup> ed.). Waco, TX: Prufrock Press.

Based on recent research in the field of gifted education, chapter authors write about their research, theories, and expertise in the provision of instruction, management, and curriculum strategies for gifted learners. Relevant chapters (Section II & III of the text), written by various authors, include unit writing, curriculum analysis, process skills, product development, teaching critical thinking, problem-based learning, creative thinking, research skills, leadership, and mentoring.

VanTassel-Baska, J., & Little, C. A. (Eds) (2003). *Content based curriculum for gifted learners*. Waco, TX: Prufrock Press.

Research-based curriculum models, based on effectiveness studies in science, social studies, and language arts are discussed based on the Integrated Curriculum Model and consequent effectiveness studies related to the model and curriculum for gifted students. A chapter with relevant examples for each core content area as well as an outline of the Integrated Curriculum Model are included.

VanTassel-Baska, J. (2003). *Curriculum planning and instructional design for gifted learners*. Denver, CO: Love Publishing.

This book provides practical applications regarding how to write and plan curriculum and instruction using standards-based instruction aligned with gifted programming. Scope and sequence development, curriculum planning, instructional delivery modes, and approaches for modifying standards are included using a planning model and an instructional model. The planning model acknowledges the important roles of curriculum planners, of task analysis, and of the educational climate of a school. The instructional model emphasizes the characteristics of gifted learners, philosophy and goals, student goals, learner outcomes, and classroom implementation.

### **Practice-based References**

Tomlinson, C. A., & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades 5-9*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A., & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades K-5*. Alexandria, VA: Association for Supervision and Curriculum Development.

Both of these books outline how to differentiate instruction for specific grade levels, as indicated using tiered lessons as a basis for instruction and grouping students based on interest, readiness, and/or learning profiles. Each book offers practical examples and lesson plans in each of the core content and grade span area as a resource for teachers to model lessons in their own classrooms using differentiation as a guide.

Tomlinson, C. A., Kaplan, S. N., Renzulli, J., Burns, D. E., Leppien, J. H., & Purcell, J. H. (2001). *The Parallel curriculum: A model for planning curriculum for gifted students and whole classrooms*. Thousand Oaks, CA: Corwin Press.

The four parallel approaches to curriculum development illustrate ascending intellectual demands as a means of extending the intensity of challenge for students as they work toward expertise in learning. The four parallel approaches include The book provides practical guidelines for developing curriculum that ensure rich curriculum for all learners.

Tomlinson, C. (1995). *Differentiating instruction for advanced learners in the mixed-ability middle school*

This brief paper summarizes guidelines for adapting instruction for advanced learners in inclusive, mixed-ability middle school classrooms. A rationale for differentiating instruction is followed by consideration of what differentiation is and is not. Characteristics of a differentiated class are enumerated, followed by suggested ways to differentiate instruction, grouped into interest-based adjustments, adjustments based on learning profile, and readiness-based adjustments. Suggested strategies for managing a differentiated classroom are also included.

## Standard 4: Instructional Strategies

### GT4S1

#### Apply pedagogical content knowledge to instructing learners with gifts and talents.

#### Research-based References

Colangelo, N., Assouline, S., & Gross, M. (2004). *A nation deceived: How schools hold back America's brightest students (Vol. II)*. Iowa City, IA: University of Iowa, Belin Blank Center.

Students who are moved ahead tend to be more ambitious, and they earn graduate degrees at higher rates than other students. Interviewed years later, an overwhelming majority of accelerated students say that acceleration was an excellent experience for them. Accelerated students feel academically challenged and socially accepted, and they do not fall prey to the boredom that plagues many highly capable students who are forced to follow the curriculum for their age-peers.

With all this research evidence, why haven't schools, parents, and teachers accepted the idea of acceleration? *A Nation Deceived* presents these reasons for why schools hold back America's brightest kids and shows that these reasons are simply not supported by research.

Corazza, L., Gustin, W., & Edelkind, L. (1995). Serving young gifted math students. *Gifted Child Today*, 18, (3). 20-21; 24-25; 40-41.

Report on a DT-PI model mathematics program for 78 girls and 89 boys selected from District 22, Brooklyn grade six classes. Students were organized into variously sized classes using college level tests with trained teachers at their local schools. Students commenced at their appropriate level and worked individually or in small, flexible groups. The authors concluded that a "pedagogy which takes into consideration the prior knowledge, ability, learning style, and motivation of each individual student and tailors an instructional strategy to satisfy his/her needs is appropriate for a broad spectrum of student ability".

Gallagher, S. A., & Stepien, W. (1996). Content acquisition in problem-based learning: Depth versus breadth in American studies. *Journal for the Education of the Gifted*, 19, 257-275.

One hundred sixty seven high school students' scores on multiple-choice standardized tests were compared after traditional and experimental instruction. In the experimental curriculum students used data and varying perspectives to resolve problems related to a variety of dilemmas such as the Salem witch trials, the use of the nuclear bomb on Hiroshima, and so on. Results indicated that students in problem-based learning classes did not sacrifice content acquisition in American Studies when compared to students learning in more traditional settings.

Gentry, M. (1999). *Promoting student achievement and exemplary classroom practices through cluster grouping: A research-based alternative to heterogeneous elementary classrooms*. Storrs, CT: The National Research Center on the Gifted and Talented.

Cluster grouping is the deliberate placement of 6-8 high ability students in the same classroom based on either cognitive or subject-area ability. This descriptive study outlines the effectiveness of cluster grouping on the achievement of talented and gifted students at the elementary level when differentiation of instruction, support networks and staff development are in place to support educators in the process.

Stamps, L. (2004). The effectiveness of curriculum compacting in first grade classrooms. *Roeper Review*, 27, 31-41.

This article provides new information about how compacting can be effective with first grade high ability students in a rural Alabama school district. The study, which replicated some aspects of the National Research Center on the Gifted and Talented curriculum compacting study, includes qualitative and quantitative data from teachers, students and parents concerning the positive attitudes of the first grade treatment group. There was a significant difference between the treatment and control group teachers' responses regarding their use of compacting, with treatment teachers reporting greater use of compacting practices. Treatment parents also reported more positive attitudes. Results indicate that treatment group students' responses were slightly higher than control group students' responses regarding student preference toward school subjects. (PsycINFO Database Record (c) 2005 APA, all rights reserved)

### Literature/Theory-based References

Rogers, K. B. (2002). *Re-forming gifted education: Matching the program to the child*. Scottsdale, AZ: Great Potential Press.

Research, best practice, and experiential wisdom from the field of gifted education are shared in this how-to book on instructional and management strategies that work in gifted education, based on Rogers' analyses of the research in gifted education. Topics include acceleration, enrichment, grouping, independent study, educational plans, extracurricular options, and monitoring student progress. An emphasis is on how programs in gifted education should be matched to the child's individual strengths.

Rogers, K. B. (1991). *The relationship of grouping practices to the education of the gifted and talented learner: Research-based decision making series*. Storrs, CT: National Research Center on the Gifted and Talented.

Thirteen research syntheses were analyzed to determine the academic, social, and psychological effects upon learners who are gifted and talented of three grouping practices: (1) ability grouping for enrichment; (2) mixed ability cooperative grouping for regular instruction; and (3) grouping for acceleration. It was concluded that the research showed strong, consistent support for the academic effects of most forms of ability grouping for enrichment and acceleration, but that the research is scant and weak concerning the socialization and psychological adjustment effects of these practices. Claims for the academic superiority of mixed ability grouping or for whole group instructional practices were not substantiated for gifted and talented learners. Other conclusions indicated that: academic outcomes of ability grouping vary substantially from effects reported for average and low ability learners; full time, pullout, and within-class grouping can all produce substantial academic gains; and there is little impact on self-esteem and a moderate gain in attitude toward subject in full time ability grouping.

Sheffield, L. (2003). *Extending the Challenge in mathematics: Developing mathematical promise in K-8 students*. Thousand Oaks, CA: Corwin Press.

This book is a guide to the development of mathematical talent in students in grades K through 8. It offers suggested investigations into the following subject areas: number and operations, algebra, geometry and measurement, and data analysis and probability, and offers activities at three levels of difficulty, based on an open problem solving heuristic.

Stronge, J. (2002). *Qualities of effective teachers*. ASCD. Alexandria, VA.

Based on a synthesis of research on highly effective teachers, Stronge found that the most effective educators must show efficacy of content knowledge in the fields they teach as well as a variety of pedagogical strategies. Additionally, rather than look at outside factors like demographics, district leadership, and state mandates, Stronge focuses specifically on what teachers can control: their own preparation, personality, and practices. This book shares how effective teachers establish, manage, and maintain learning-focused classroom environments, organize time, communicate expectations, and plan instruction, present curriculum to support active and engaged learning, and monitor student progress, identify student potential, and meet the needs of special populations in the classroom.

Tomlinson, C. A. (Ed) (2004). *Differentiation for gifted and talented students*. Waco, TX: Prufrock Press.

Seminal research articles from *Gifted Child Quarterly*, a peer-reviewed journal from the National Association for Gifted Children, are compiled on differentiation. Included are articles on the effectiveness

of curriculum compacting, the effects of staff development, case studies of best practices for gifted students, and other pedagogical strategies.

VanTassel-Baska, J., & Little, C. A. (Eds) (2003). *Content based curriculum for gifted learners*. Waco, TX: Prufrock Press.

Research-based curriculum models, based on effectiveness studies in science, social studies, and language arts are discussed based on the Integrated Curriculum Model and consequent effectiveness studies related to the model and curriculum for gifted students. Graphic organizers and examples for each content area are thoroughly explained with relevant examples.

### Practice-based References

Angelelli, C., Enright, K., & Valdés, G. (2002). *Developing the talents and abilities of linguistically gifted bilingual students: Guidelines for developing curriculum at the high school level* (RM02156). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph contains general suggestions for implementing a curriculum in interpretation and translation at the high school level for bilingual youngsters who are experienced interpreters for their families. It includes a brief introductory discussion of the importance of nurturing the abilities of linguistically talented students and presents a brief introduction to the field of interpretation and translation. It includes general suggestions for implementing a curriculum in interpretation and translation as well as basic lesson suggestions that can be followed in teaching beginning courses in interpretation and translation.

Renzulli, J. S., Leppien, J. H., & Hays, T. S. (2000). *The multiple menu model: A practical guide for developing differentiated curriculum*. Mansfield Center, CT: Creative Learning Press.

Based on constructivist learning theory, The Multiple Menu Model presents six practical menus that guide curriculum developers as they bring together an understanding of a discipline, its content and methodologies, and a vast array of instructional techniques. Teachers have successfully used this approach to challenge learners on all levels and make learning more meaningful, relevant, and engaging.

Renzulli, J. S., & Reis, S. (2004). Curriculum compacting: A research-based differentiation strategy for culturally diverse talented students. In D. Boothe & J.C. Stanley (Eds.). *In the eyes of the beholder: Critical issues for diversity in gifted education*. (pp. 87-100). Waco, TX: Prufrock Press.

Curriculum compacting is a strategy to differentiate for high-achieving and high-potential students and can be used in all classrooms to help students who have proven mastery of material that must be covered by other students. In the current climate of urban schools, teachers are expected to meet the needs of an increasingly diverse group of students in their classrooms. Curriculum compacting is a successful intervention to keep high-potential students engaged. (PsycINFO Database Record (c) 2005 APA, all rights reserved).

Tomlinson, C. A., & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades 5-9*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A., & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades K-5*. Alexandria, VA: Association for Supervision and Curriculum Development.

Both of these books outline how to differentiate instruction for specific grade levels, as indicated using tiered lessons as a basis for instruction and grouping students based on interest, readiness, and/or learning profiles. Specific lesson plans for each core content are shared with examples of how teachers can not only plan but manage a differentiated classroom.

Winebrenner, S. (2003). *Teaching gifted kids in the regular classroom* (2<sup>nd</sup> ed.). Minneapolis, MN: Free Spirit.

This teacher-friendly book provides forms, templates, and examples of ways teachers can pre-assess student learning and provide alternate activities based on student interest. Five-most difficult first strategies as well as curriculum compacting approaches are emphasized along with student contracts

and menus.

## Standard 4: Instructional Strategies

### GT4S2

**Apply higher-level thinking and metacognitive models to content areas to meet the needs of individuals with gifts and talents.**

#### Research-based References

Hannah, C.L. & Shore, B.M. (1995). Metacognition and high intellectual ability: Insights from the study of learning-disabled gifted students. *Gifted Child Quarterly*, 39, 95-109.

Learning disabled gifted children at the secondary level differ in their use of metacognitive strategies in reading when compared to the learning disabled population and the gifted population separately, aligning themselves more with the gifted population in terms of performance trends and the types of metacognitive strategies used.

VanTassel-Baska, J., Avery, L.D., Little, C., & Hughes, C. (2000). An evaluation of the implementation of curriculum innovation: The impact of the William and Mary units on schools. *Journal for the Education of the Gifted*, 23, 244-272.

Based on focus groups, interviews, documents, and classroom observations of schools implementing the William and Mary language arts and science curricula it was found that students, teachers, parents, and administrators observed increased student engagement in class, enhanced reasoning skills, and the improvement of habits of mind – including metacognition.

VanTassel-Baska, J., Bass, G., Ries, R., Poland, D., & Avery, L.D. (1998). A national study of science curriculum effectiveness with high ability students. *Gifted Child Quarterly*, 42, 200-211.

The study assessed the growth of 1,471 4-6th graders on integrated science process skills after being taught a 20-36 hour science unit. The prototypical unit, Acid, Acid Everywhere, was implemented in 15 school districts across 7 states. All units were based on the Integrated Curriculum Model developed specifically for gifted learners. Results indicate small, but significant gains for students in integrated science process skills when compared to equally able students not using the units. Implementation data reflected satisfaction of teachers with the units, especially in terms of student interest and motivation. (PsycINFO Database Record (c) 2004 APA, all rights reserved).

VanTassel-Baska, J., Johnson, D.T., Hughes, C. E., & Boyce, L.N. (1996). A study of language arts curriculum effectiveness with gifted learners. *Journal for the Education of the Gifted*, 19, 461-480.

Using the Integrated Curriculum Model framework and graphic organizers that promote higher level thinking in the language arts, control and experimental students were assessed pre and post treatment using performance-based assessments in writing, grammar, and literary analysis. The students in the experimental group significantly improved in all three dimensions of the assessment and outperformed the control group.

#### Literature/Theory-based References

Anderson, L.W. & Krathwohl, (Eds). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman.

Based on Bloom's Taxonomy, the authors introduce creative production as the highest level of Bloom's and provide a rationale and examples of questions and activities for teachers to scaffold learning processes to promote higher level tasks.

Paul, R., & Elder, L. (2002). *Critical thinking: Tools for taking charge of your professional and personal life*. New York: Prentice Hall.

This book outlines core skills of effective thinking and metacognition so one may analyze his/her own thought processes and understand how people think, including the types of thinking and levels of thinking that take place in a given situation. These skills can easily be applied to the classroom and instruction as educators may apply these skills to analyze student responses and questions and ask more difficult questions in the classroom as well.

Steiner, H.H. & Carr, M. (2003). Cognitive development in gifted children: Toward a more precise understanding of emerging differences in intelligence. *Educational Psychology Review*, 15, 215-246.

This article presents traditional research on gifted children's cognitive development then considers how the application of newer models and theories from the field of cognitive development can be combined with research on giftedness to change the way people think about gifted performance. First factors that have often been associated with giftedness are discussed from the perspectives of cognitive developmental psychology and gifted education. Next, emphasis is placed on investigating the strategic development of gifted children. Finally, future lines of research using models from cognitive development and complex systems models of development are recommended.

### Practice-based References

Carr, M., Alexander, J.M., & Schwanenflugel, P.J. (1996). Where gifted children do and do not excel on metacognitive tasks. *Roeper Review*, 18, Feb/Mar 212-217.

The authors explain five components of metacognition in gifted students: strategy use, strategy knowledge, acquisition procedures for monitoring strategy effectiveness and creating new strategies, an understanding of how strategies may be related, and a belief that strategies used are beneficial. Furthermore, they found that gifted students, when compared to nongifted students, use more strategies in flexible manners and are better able to transfer strategies learned to other situations.

Coates, D. L., Perkins, T., Vietze, P., Reyes Cruz, M., & Park, S. (2003). *Teaching thinking to culturally diverse, high ability, high school students: A triarchic approach* (RM03174). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph describes intervention research to improve thinking skills in high ability, high school students attending an urban magnet school for primarily low-income ethnic minority students who come from families that have historically experienced social inequality and various forms of discrimination in the United States. The intervention approach used is based on the Sternberg triarchic theory of intelligence. Among the conclusions were: college-based intensive and supportive intervention activities improved analytical and creative thinking skills, but not did improve practical skills; confidence in using English was related to writing performance measures rather than a preference for using English and students with higher grade point averages tended to be more hierarchical thinkers (i.e., they tend to prefer tasks that allow the creation of a hierarchy of goals to fulfill).

Elder, L. & Paul, R. (2004). *The art of asking essential questions*. Dillon Beach, CA: The Foundation for Critical Thinking.

This booklet provides examples of ways teachers can ask analytic and evaluative type questions across academic disciplines and teach children how to question for self-knowledge and self development. Models for Socratic questioning are included.

Elder, L. & Paul, R. (2004). *Guide to the human mind: How it learns, how it mislearns*. Dillon Beach, CA: The Foundation for Critical Thinking.

This booklet explains how the human mind works and how thinking happens. Questions surrounding clarity, depth, breadth, accuracy, points of view, perceptions, and implications are emphasized.

Elder, L. & Paul, R. (2003). *Analytic thinking: How to take thinking apart and what to look for when you do*. Dillon Beach, CA: The Foundation for Critical Thinking.

This booklet provides open-ended question stems based on logic across disciplines. Rubrics to analyze thinking are also provided based on the scaffolding of reasoning through events or situations by

determining the central purpose or question at issues, gathering information or data, examining inferences and interpretations based on data, understanding assumptions of others and self, and recognizing other points of view and the implications and consequences of actions.

## Standard 4: Instructional Strategies

### GT4S3

**Provide opportunities for individuals with gifts and talents to explore, develop, or research their areas of interest or talent.**

#### Research-based References

Hébert, T. P. (1993). Reflections at graduation: The long-term impact of elementary school experiences in creative productivity. *Roeper Review*, 16, 22-28.

Students who participated in interest and research-based activities based on Renzulli's Schoolwide Enrichment Model in fourth through sixth grade were interviewed their senior year of college. Findings suggest that interest and research based activities positively impact post-second plans and future desires for creativity.

Hertzog, N. (1995). *Open-Ended Activities: Differentiation through learner responses*. ED 384623.

In this qualitative study, the nature of open-ended activities was explored in a 3<sup>rd</sup> and 4<sup>th</sup> grade heterogeneously grouped classroom. Data sources included observations, interviews with teachers and students, learning style and interest assessment instruments, and documents related to the open-ended activities. The relationship between the open-ended activities and responses of 11 students identified as gifted is the focus of the study. Findings demonstrated that targeted students' responses were qualitatively different from those of nontarget students. Children's responses demonstrated differences in ability levels, but it was not necessarily the case that targeted students' response matched their ability levels. (Author abstract).

Moon, S. M., Feldhusen, J. F., & Dillon, D. R. (1994). Long-term effect of an enrichment program based on the Purdue Three-Stage Model. *Gifted Child Quarterly*, 38, 38-48.

Based on student and parent questionnaires and school data, the Purdue Three-Stage Model of enrichment was examined. Students preferred to work on personally-generated studies based on their areas of interest instead of teacher assigned ones.

#### Literature/Theory-based References

Gagné, F. (1995). From giftedness to talent: A developmental model and its impact on the language of the field. *Roeper Review*, 18, 103-111.

Gagné's Differentiated Model of Giftedness and Talent illustrates the impact of environmental catalysts such as family, community, life events, and interests as well as natural catalysts such as student precocity and intelligence that impact life achievement, suggesting importance on providing community and family resources in a talent domain for precocious students.

Moore, B. (2005). Developing research skills in gifted students. In F. A. Karnes, & S. M. Bean, (Eds). *Methods and materials for teaching the gifted (2<sup>nd</sup> ed., pp. 353-378)*. Waco, TX: Prufrock Press.

This chapter outlines how educators can design opportunities for students to develop research skills using a given template that incorporates the steps of the research model.

Renzulli, J. S. & Reis, S. M. (2003). The schoolwide enrichment model: Developing creative and productive giftedness. In N. Colangelo, & G.A. Davis (Eds.) *Handbook of gifted education (3<sup>rd</sup> ed., pp.184-203)*. Boston, MA: Allyn & Bacon.

This chapter outlines the research evidence and “how-to” applications of the Schoolwide Enrichment Model, including how students may explore and research areas of interest after compacting out of content already known.

### Practice-based References

Center for Gifted Education (2000). *Center for Gifted Education research model*. Williamsburg, VA: College of William and Mary, Author.

This research model is based on Paul's Reasoning Model and provides step-by-step questions to assist students with conducting real-world research through question posing, data collection, interpretation, product creation and determination of implications and consequences based on the data.

Johnsen, S.K. & Johnson, K. (1986). *Independent study program*. Waco, TX: Prufrock Press.

The Independent Study Program provides resource cards that guide students through the eight steps of independent study: selecting a topic, organizing a topic, asking questions, using a study method, collecting information, developing a product, presenting information, and evaluating the study. Instructions for teacher use and tips for classroom management are included.

Renzulli, J. (1997). *Interest-a-lyzer family of instruments*. Mansfield Center, CT: Creative Learning Press.

This manual describes the six interest assessment tools that comprise the Interest-A-Lyzer "Family of Instruments." Dr. Renzulli discusses the importance of assessing student interests and provides suggestions for administering and interpreting these instruments in the school setting. Sample pages from each interest assessment tool are included in the appendix.

## Standard 4: Instructional Strategies

### GT4S4

**Preassess the learning needs of individuals with gifts and talents in various domains and adjust instruction based on continual assessment.**

### Research-based References

Ablard, K. E., Mills, C. J., & Duvall, R. (1994). *Acceleration of CTY math and science students* (Tech. Rep. No. 10). Baltimore, MD: Johns Hopkins University, Center for Talented Youth.

Varied types of acceleration including individually paced Pre-calculus and Fast-Paced Science courses from the Center for Talented Youth, using diagnostic-prescriptive approaches were examined and student perceptions discussed. Students felt that acceleration was overall positive but felt isolated from their peers and uncomfortable being in classes with older students. However, students felt that the opportunity to be challenged outweighed the social negatives.

Reis, S. M., Westberg, K. L., Kulikowich, J. M. & Purcell, J. H. (1998). Curriculum compacting and achievement test scores: What does the research say? *Gifted Child Quarterly*, 42, 123-129.

This study examined the effects of curriculum compacting on the achievement test scores of a national sample of 336 high ability students from second through sixth grade heterogeneous classrooms in rural, suburban, and urban settings. Teachers from three treatment and control groups in this experimental study selected one to two students from their classes who demonstrated superior ability and advanced content knowledge prior to instruction. They were able to eliminate between 40%-50% of curricula for these students across content areas. Pre and post student achievement results indicated that the achievement test scores of students whose curriculum was compacted did not differ significantly from students whose curriculum was not compacted. These findings from a national study minimize teachers' fears about declines in students' achievement test scores due to compacting. (PsycINFO Database Record (c) 2004 APA, all rights reserved).

Swiatek, M. A. (1993). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review*, 15, 120-123.

Five cohorts who participated in the Johns Hopkins University Study of Mathematically Precocious Youth were surveyed at age 19, some at age 23, and some at age 33. Students who choose to accelerate in high school do not suffer academically but gain speed in their educational preparation and enjoy greater success in college.

### Literature/Theory-based References

Johnsen, S. (2005). Within-class acceleration, *Gifted Child Today*, 28(1), 5.

This article describes ways teachers can accelerate the curriculum in their classrooms by pre-assessing students and modifying their instruction, allowing them the either move through the curriculum at a faster pace or to provide in-depth learning experiences with more depth.

Tomlinson, C.A. (2001). *How to differentiate instruction in mixed ability classrooms* (2nd ed.). Alexandria, VA: Association of Supervision and Curriculum Development.

The author suggests ideas for how to match instructional approaches to readiness, interests, and talents of students and discusses learning centers, hands-on activities, contracts, investigative projects, and more. An appendix lists strategies, including pre-testing and compacting the curriculum, independent projects, interest centers, and tiered assignments. (Taken from website).

VanTassel-Baska, J. (2004). *The acceleration of gifted students' programs and curriculum*. Waco, TX: Prufrock Press.

This teacher-friendly book outlines the rationale for acceleration, the research base on the effects of acceleration, and the types of acceleration. Usable forms and examples of ways teachers can collapse the curriculum, use diagnostic-prescriptive teaching, and effectively document and proactively plan for gifted children's growth and acceleration in school are also included.

### Practice-based References

Reis, S. M., Burns, D. E., & Renzulli, J. S. (1992). *Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students*. Mansfield Center, CT: Creative Learning Press.

This book provides strategies and forms as well as a rationale for teachers to compact the curriculum based on student pre-assessments. Once students demonstrate mastery of a given topic through pre-assessment options, students are provided contracts for independent study opportunities.

Winebrenner, S. (2003). *Teaching gifted kids in the regular classroom* (2<sup>nd</sup> ed.). Minneapolis, MN: Free Spirit.

This teacher-friendly book provides forms, templates, and examples of ways teachers can pre-assess student learning and provide alternate activities based on student interest. Five-most difficult first strategies as well as curriculum compacting approaches are emphasized along with student contracts and menus.

*Gilman, B. (2004). Empowering gifted minds: Educational advocacy that works. CO: DeLeon Publishing .* The definitive manual on gifted advocacy, it contains a wealth of concrete information about the nature of giftedness, assessment, appropriate curriculum and instruction, dealing with underachievement, twice exceptional children, programming at all grade levels, advocacy models, exemplary teachers, charter schools, developing individual educational plans (IEPs), and long-range educational planning for the gifted. The necessity for daily accommodations in regular instruction (not just enrichment pull-outs) is emphasized by the children themselves—in case studies and their own accounts.

Renzulli, J. S. & Reis, S. M. (2003). The schoolwide enrichment model: Developing creative and productive giftedness. In N. Colangelo, & G.A. Davis (Eds.) *Handbook of gifted education* (3<sup>rd</sup> ed., pp.184-203). Boston, MA: Allyn & Bacon.

This chapter outlines the research evidence and “how-to” applications of the Schoolwide Enrichment Model, including how students may explore and research areas of interest after compacting out of content already known. The pace of instruction is accelerated based on what the student already knows and then decelerated so in-depth learning in a particular area of interest can be studied.

Renzulli, J. S. & Reis, S. M. (2003). The schoolwide enrichment model: Developing creative and productive giftedness. In N. Colangelo, & G.A. Davis (Eds.) *Handbook of gifted education (3<sup>rd</sup> ed., pp.184-203)*. Boston, MA: Allyn & Bacon.

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Rogers, K. (2002). *Re-forming gifted education: Matching the program to the child*. Scottsdale, AZ: Great Potential Press.

Research, best practice, and experiential wisdom from the field of gifted education are shared in this how-to book on instructional and management strategies that work in gifted education, based on Rogers’ analyses of the research in gifted education. Topics include acceleration, enrichment, grouping, independent study, educational plans, extracurricular options, and monitoring student progress, all of which emphasize either breadth, depth, or a combination of pacing. An emphasis is on how programs in gifted education should be matched to the child’s individual strengths.

Southern, T. & Jones, E. (Eds.) (1991). *The academic acceleration of gifted children*, New York, NY: Teachers’ College Press.

This book provides a major review of the history and background issues surrounding this topic, past and present research, and the state of the implementation of accelerative practices in American schools. Designed to assist readers in digesting and critiquing a substantial body of literature regarding academic acceleration, this book also furnishes help in determining who the potential, successful candidates for acceleration might be; what instruments and procedures to use in programs, and the strategies for gauging results. (PsycINFO Database Record (c) 2004 APA, all rights reserved).

### Practice-based References

Reis, S.M., Burns, D.E., & Renzulli, J.S. (1992). *Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students*. Mansfield Center, CT: Creative Learning Press.

This book provides strategies and forms as well as a rationale for teachers to compact the curriculum based on student pre-assessments. Once students demonstrate mastery of a given topic through pre-assessment options, students are provided contracts for independent study opportunities.

VanTassel-Baska (2004). Curricular diversity and the gifted. In D. Boothe, Diane & J.C. Stanley, (Eds). *In the eyes of the beholder: Critical issues for diversity in gifted education*. (pp. 167-178). Waco, TX, US: Prufrock Press.

To design appropriate curricula for any target group, it is necessary to understand their nature and needs as they relate to curriculum design. This is especially true for gifted learners, whose major characteristics of advanced development immediately render them at risk in a school system committed to a rigid age-grade curricular model. The Integrated Curriculum Model has proven to be an effective tool in organizing curricula that work with these learners. The Integrated Curriculum Model is comprised of three interrelated curricular dimensions that are responsive to different aspects of the gifted learner: emphasizing advanced content knowledge that frames disciplines of study; providing higher order thinking and processing; and focusing learning experiences around major issues, themes, and ideas that define both real-world applications and theoretical modeling within and across areas of study. (PsycINFO Database Record (c) 2005 APA, all rights reserved)

Winebrenner, S. (2003). *Teaching gifted kids in the regular classroom* (2<sup>nd</sup> ed.). Minneapolis, MN: Free Spirit.

This teacher-friendly book provides forms, templates, and examples of ways teachers can pre-assess student learning and provide alternate activities based on student interest. Five-most difficult first strategies as well as curriculum compacting approaches are emphasized along with student contracts and menus.

## **Standard 4: Instructional Strategies**

### **GT4S5**

**Pace delivery of curriculum and instruction consistent with needs of individuals with gifts and talents.**

#### **Research-based References**

Reis, S. M., Westberg, K. L., Kulikowich, J. M. & Purcell, J. H. (1998). Curriculum compacting and achievement test scores: What does the research say? *Gifted Child Quarterly*, 42, 123-129.

This study examined the effects of curriculum compacting on the achievement test scores of a national sample of 336 high ability students from second through sixth grade heterogeneous classrooms in rural, suburban, and urban settings. Teachers from three treatment and control groups in this experimental study selected one to two students from their classes who demonstrated superior ability and advanced content knowledge prior to instruction. They were able to eliminate between 40%-50% of curricula for these students across content areas. Pre and post student achievement results indicated that the achievement test scores of students whose curriculum was compacted did not differ significantly from students whose curriculum was not compacted. These findings from a national study minimize teachers' fears about declines in students' achievement test scores due to compacting. (PsycINFO Database Record (c) 2004 APA, all rights reserved).

Swiatek, M. A. (1993). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review*, 15, 120-123.

Five cohorts who participated in the Johns Hopkins University Study of Mathematically Precocious Youth were surveyed at age 19, some at age 23, and some at age 33. Students who choose to accelerate in high school do not suffer academically but gain speed in their educational preparation and enjoy greater success in college.

## Literature/Theory-based References

Gilman, B. (2004). *Empowering gifted minds: Educational advocacy that works*. CO: DeLeon Publishing .

The definitive manual on gifted advocacy, it contains a wealth of concrete information about the nature of giftedness, assessment, appropriate curriculum and instruction, dealing with underachievement, twice exceptional children, programming at all grade levels, advocacy models, exemplary teachers, charter schools, developing individual educational plans (IEPs), and long-range educational planning for the gifted. The necessity for daily accommodations in regular instruction (not just enrichment pull-outs) is emphasized by the children themselves—in case studies and their own accounts.

Renzulli, J. S. & Reis, S. M. (2003). The schoolwide enrichment model: Developing creative and productive giftedness. In N. Colangelo, & G.A. Davis (Eds.) *Handbook of gifted education (3<sup>rd</sup> ed., pp.184-203)*. Boston, MA: Allyn & Bacon.

This chapter outlines the research evidence and “how-to” applications of the Schoolwide Enrichment Model, including how students may explore and research areas of interest after compacting out of content already known. The pace of instruction is accelerated based on what the student already knows and then decelerated so in-depth learning in a particular area of interest can be studied.

Rogers, K. (2002). *Re-forming gifted education: Matching the program to the child*. Scottsdale, AZ: Great Potential Press.

Research, best practice, and experiential wisdom from the field of gifted education are shared in this how-to book on instructional and management strategies that work in gifted education, based on Rogers’ analyses of the research in gifted education. Topics include acceleration, enrichment, grouping, independent study, educational plans, extracurricular options, and monitoring student progress, all of which emphasize either breadth, depth, or a combination of pacing. An emphasis is on how programs in gifted education should be matched to the child’s individual strengths.

Southern, T. & Jones, E. (Eds.) (1991). *The academic acceleration of gifted children*, New York, NY: Teachers’ College Press.

This book provides a major review of the history and background issues surrounding this topic, past and present research, and the state of the implementation of accelerative practices in American schools. Designed to assist readers in digesting and critiquing a substantial body of literature regarding academic acceleration, this book also furnishes help in determining who the potential, successful candidates for acceleration might be; what instruments and procedures to use in programs, and the strategies for gauging results. (PsycINFO Database Record (c) 2004 APA, all rights reserved).

## Practice-based References

Reis, S.M., Burns, D.E., & Renzulli, J.S. (1992). *Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students*. Mansfield Center, CT: Creative Learning Press.

This book provides strategies and forms as well as a rationale for teachers to compact the curriculum based on student pre-assessments. Once students demonstrate mastery of a given topic through pre-assessment options, students are provided contracts for independent study opportunities.

VanTassel-Baska (2004). Curricular diversity and the gifted. In D. Boothe, Diane & J.C. Stanley, (Eds). *In the eyes of the beholder: Critical issues for diversity in gifted education*. (pp. 167-178). Waco, TX, US: Prufrock Press .

To design appropriate curricula for any target group, it is necessary to understand their nature and needs as they relate to curriculum design. This is especially true for gifted learners, whose major characteristics of advanced development immediately render them at risk in a school system committed to a rigid age-grade curricular model. The Integrated Curriculum Model has proven to be an effective tool in organizing curricula that work with these learners. The Integrated Curriculum Model is comprised of three interrelated

curricular dimensions that are responsive to different aspects of the gifted learner: emphasizing advanced content knowledge that frames disciplines of study; providing higher order thinking and processing; and focusing learning experiences around major issues, themes, and ideas that define both real-world applications and theoretical modeling within and across areas of study. (PsycINFO Database Record (c) 2005 APA, all rights reserved)

Winebrenner, S. (2003). *Teaching gifted kids in the regular classroom* (2<sup>nd</sup> ed.). Minneapolis, MN: Free Spirit.

This teacher-friendly book provides forms, templates, and examples of ways teachers can pre-assess student learning and provide alternate activities based on student interest. Five-most difficult first strategies as well as curriculum compacting approaches are emphasized along with student contracts and menus.

## Standard 4: Instructional Strategies

### GT4S6

**Engage individuals with gifts and talents from all backgrounds in challenging, multicultural curricula.**

#### Research-based References

Ford, D. Y. & Harris III, J. (1997). A study of the racial identity and achievement of Black males and females. *Roeper Review*, 20, 105-110.

This study of 152 Black males and females found that 62 students were underachieving and had less positive racial identities than achieving students. Suggestions for reducing underachievement including a counseling focus to help some Black students cope with the difficulties of being in a predominately White gifted program (e.g., negative peer pressures, poor peer relations, feelings of isolation, and sensitivity about feeling different).

Kurlaender, M. & Yun, J. T. (2001). Is diversity a compelling educational interest? Evidence from Louisville. In G. Orfield (Ed.), *Diversity challenged: Evidence on the impact of affirmation action* (pp. 111-141). Cambridge: Harvard Education Publishing Group.

About 90% of 1000 high school students surveyed in Louisville schools reported that greater exposure in the curriculum to diverse cultures and experiences had helped them to better understand points of view different from their own. They felt comfortable learning about differences among people from different racial and ethnic groups, and working with students from other language backgrounds.

Mills, C. J., Stork, E.J., & Krug, D. (1992). Recognition and development of academic talent in educationally disadvantaged students. *Exceptionality*, 3, 165-180.

Thirty-six students who scored average on standardized achievement tests and were economically disadvantaged were provided with a program to enhance their mathematics or language arts ability. Twenty-eight students served as a comparison group and received no treatment. After the intervention, the majority of students in the treatment group qualified for academically gifted programs.

VanTassel-Baska, J., Feng, A. X., Quek, C., & Struck, J. (2004). A study of educators' and students' perceptions of academic success for underrepresented populations identified for gifted programs. *Psychology Science*, 46(3), 363-378.

This article presents a study of the perceptions of teachers, program coordinators, and students on the adjustment and impact after two years of placing students identified through performance-based assessment in gifted programs, many of whom were low income and minority students in one state. Surveys focus groups and interviews were used to collect data. All groups concurred that gifted program

participation was beneficial in the areas of enhancing self confidence, developing stronger communication skills, and learning to think in different ways. On the whole, these students were well-motivated, and showed evidence of growth in the gifted program curriculum over the two year period. For some students problems with persistence, organizational skills, time management, and lack of verbal skills overshadowed their participation. Implications include the need to follow students identified through nontraditional measures longitudinally to judge impact across the span of their years in school to assess overall schooling impacts.

### Literature/Theory-based References

Boothe, D. & Stanley, J. C. (Eds.) (2004). *In the eyes of the beholder: Critical issues for diversity in gifted education*. Waco, TX: Prufrock Press.

Each chapter in this book is dedicated to the needs of diverse populations of gifted students including issues in gifted education related to race, gender, and socioeconomic status. Chapters include issues such as underachievement and African American students, empowering Hispanic students in gifted education, curriculum compacting as a research-based strategy for diverse students, and talent searches in gifted education.

Ford, D. (1996). *Reversing underachievement among gifted black students: Promising practices and programs*. New York: Teachers College Press.

This book describes reasons why black students may underachieve and outlines practical ways in which teachers can provide positive, high level learning experiences to reduce underachievement in minority populations. Chapters 3 and 4 address issues such as underachievement, strategies for reversing underachievement, and social factors as correlates of underachievement. Chapters 5 and 6 assess cultural factors as correlates of underachievement, resistance to crossing cultural borders, psychological factors as correlates of underachievement, and barriers to meeting the psychological needs of gifted black students. Chapters 7 and 8 investigate gender issues in underachievement and educational attainment, school influences on underachievement, and multicultural education.

VanTassel-Baska, J. (2003). *Content-based curriculum for low income and minority gifted learners* (RM03180). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph addresses planning and developing curricula for low income and minority gifted learners. Issues discussed include collaboration among professionals working with these students, choice of school program delivery models, involvement of parent and community support systems in nurturing potential, and curriculum interventions directed toward the needs and profiles of this population. New directions for future curriculum and program design for use with low income and minority gifted learners are also discussed.

### Practice-based References

Ford, D. Y. & Harris III, J. J. (1998). *Multicultural gifted education*. New York: Teachers College Press.

Lesson plans and examples that incorporate multiculturalism are listed in this teacher-friendly book. Ideas for incorporating multiculturalism into service learning opportunities, readings, discussions, and units are provided.

Renzulli, J. S. & Reis, S. M. (2004). Curriculum compacting: A research-based differentiation strategy for culturally diverse talented students. In D. Boothe, & J. C. Stanley (Eds.) *In the eyes of the beholder: Critical issues for diversity in gifted education*. (pp.87-100) Waco, TX: Prufrock Press.

This chapter provides case study examples, classroom scenarios, forms, and a rationale for using curriculum compacting with culturally diverse talented students based on the existing research parallels from the literature and characteristics of those students who typically underachieve, especially students in urban areas. Step-by-step instructions are outlined to assist the teacher with implementing compacting.

## Standard 4: Instructional Strategies

### GT4S7

**Use information and/or assistive technologies to meet the needs of individuals with exceptional learning needs.**

#### Research-based References

Ravaglia, R., Suppes, P., Stillinger, C., & Alper, T.M. (1995). Computer-based mathematics and physics for gifted students. *Gifted Child Quarterly*, 39, 7-13.

A group of 27 middle and high school students took computer-based advanced math and science classes designed by the Education Program for Gifted Youth (EPGY). The majority (88-100%) of students taking the courses scored a 4 or 5 on Advanced Placement tests regardless of their age.

Tyler-Wood, T., Perez Cereijo, M. V., & Holcomb, T. (2002). Technology skills among gifted students: Is there a digital divide? *Journal for Computing in Teacher Education*, 18(2), 57-60.

Results indicated that rural gifted students were at a disadvantage when compared to their inner-city and suburban counterparts. In resolving the differences, more teachers' awareness and preparation is needed, as are educational partnerships between industries and schools. (Taken from [www.hoagiesgifted.com](http://www.hoagiesgifted.com))

#### Literature/Theory-based References

Pyryt, M. C. (2003). Technology and the gifted. In N. Colangelo & G.A. Davis (Eds.) *Handbook of Gifted Education* (3<sup>rd</sup> ed., pp. 582-589). Boston, MA: Allyn & Bacon.

This chapter describes various ways of using technology to enhance the experiences of gifted individuals in the classroom using Treffingers's IPPM (Individualized Programming Planning Model) as a framework.

Siegle, D. (2004). *Using media and technology with gifted learners*. Waco, TX: Prufrock Press.

Gifted students are particularly skilled at becoming technologically literate and putting technology to use to solve problems in creative ways. From computers, the Internet, and video and sound editing software, to new research tools, education for gifted children in the 21st Century offers exciting opportunities. This book provides K-12 examples of how technology can be utilized for gifted learners as a way to differentiate and supplement to the curriculum.

VanTassel-Baska, J., & Stambaugh, T. (2006). Using technology to supplement gifted curriculum. In *Comprehensive curriculum for gifted learners* (3<sup>rd</sup> ed.). Boston, MA: Allyn & Bacon.

This chapter connects the characteristics of gifted students with various technology instructional approaches that can supplement instruction for gifted learners. Options such as Webquests, simulations, distance learning, software programs, virtual field trips, ask-the-expert sites, telementoring, and hardware options such as graphing calculators or specialized laboratory equipment are discussed.

#### Practice-based References

Berger, S. (2003). Technology and gifted learners. In W. A. Owings & L. S. Kaplan (Eds). *Best practices, best thinking, and emerging issues in school leadership*. (pp. 177-190). Thousand Oaks, CA, US: Corwin Press

Teachers have discovered new ways to meet gifted and intellectually advanced students' needs using technology when differentiating curricula within mixed-ability classrooms. Studies show that student achievement is higher when teachers organize instruction around assignments that connect to students' lives beyond school, demand higher-order thinking, in-depth understanding, and elaborated communication. This technology-integrated learning process allows gifted students to pursue their

individual interests within the curriculum to a direction, depth, and subtlety which they find highly motivating. As a result, students produce more intellectually complex work and perform at a higher level on standardized tests. Unfortunately, less than 10% of teachers have the technology facility to actively use computers to advance student learning and only 23% report feeling well prepared to use computers or the Internet in the classroom. Staff development for technology integration is a critical concern for classroom teachers. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

Cross, T. L. (2004). Technology and the unseen world of gifted students. *Gifted Child Today*, 27(4), 14-15, 63-65.

This article reflects on the four types of communications in technology that are or could be used by gifted students that could promote social and emotional development: e-mail, chat-rooms, online journals and diaries, and instant messaging.

## Standard 5: Learning Environments and Social Interactions

Educators of the gifted actively create learning environments for individuals with gifts and talents that foster cultural understanding, safety and emotional well-being, positive social interactions, and active engagement. In addition, educators of the gifted foster environments in which diversity is valued and individuals are taught to live harmoniously and productively in a culturally diverse world. Educators of the gifted shape environments to encourage independence, motivation, and self-advocacy of individuals with gifts and talents.

### GT5K1

**Ways in which groups are stereotyped and experience historical and current discrimination and implications for gifted education.**

#### Research-based References

Hyde, J.S., Fennema, E., Ryan, M., & Frost, L. A. (1990). Gender comparisons of mathematics attitudes and affect: A meta-analysis. *Psychology of Women Quarterly*, 14, 299-324.

Conducted a meta-analysis of gender differences in attitudes (ATs) and affect (AF) specific to mathematics using 70 studies and 63,229 Ss. Overall, effect sizes were small and similar in size to gender differences in math performance. When differences were found the pattern was for females to hold more negative ATs. Gender differences in self-confidence and general math ATs were larger among high school and college students than among younger students. Effect sizes for math anxiety differed depending on the sample (highly selected or general). One exception to the general pattern was in stereotyping math as a male domain, where males held more stereotyped ATs. ATs and AF toward math are important influences on the development of gender differences in math performance. Both male and female ATs and AF should be considered in conjunction with other social and political influences. A listing of studies of gender differences in ATs and AF is appended.

Kitano, M., & Perkins, C. (1996). International gifted women: Developing a critical human resource. *Roeper Review*. 19, 34-40.

Investigated factors affecting lifespan achievement (LA) of 16 25-43 yr old gifted women (GW) from 15 countries in Africa, Asia, Latin America and the Caribbean, and Eastern and Western Europe to increase understanding of GW around the globe. Individual written questionnaires and focus groups with specific questions regarding factors that encouraged or discouraged Ss' LA and obstacle coping strategies (COSs) were used. Results showed that GWs from highly diverse countries share personal characteristics of determination, love of learning, willingness to take risks, and an indomitable will to achieve their goals. Most attributed their success to their own motivation and to family support or to their internal resources with support from individuals who recognized their talent. Ss identified several factors that hindered their progress, including economic limitations and cultural barriers for women, and described 8 positive COSs.

#### Literature/Theory-based References

Arnold, K., Noble, K., & Subotnik, R.F. (Eds). (1996). *Remarkable women: Perspectives on female talent development*. Perspectives on creativity. Cresskill, NJ, England: Hampton Press, Inc.

*Remarkable Women: Perspectives on Female Talent Development* is [a] book to consolidate and expand existing knowledge about highly capable women and the internal and external forces that lead them to extraordinary adult accomplishment. The collected studies include women from a wide variety of backgrounds and talent domains whose paths to exceptional achievement illuminate the nature of female talent development and provide models to help more women fulfill their promise in adulthood.

Craig, H., Craig, A. & Pendarvis, E. (1995). *Out of our minds: Anti-intellectualism and talent development in American schooling*. Education and Psychology of the Gifted Series. Teachers' College Press.

In interpreting the intellectual and cultural contexts of gifted education, this book considers how and why

U.S. schooling fails to care for intellect and to develop the talents of all children. Rather than acting as stewards charged with nurturing intellectual development, schools concertedly devalue intellect, and this shortcoming is most striking in the case of the gifted. The culture of schools conditions responses from teachers, students, and parents that constrain learning to specific instrumental purposes. Such objectives are based in prevailing societal values and are part of the larger aims of preparing "competitive" workers to serve the nation's economic interest and, in the case of gifted students, producing efficient and pragmatic technicians and managers who will respond uncritically to what their employers ask of them. Chapters in this book discuss the origins and mechanisms of anti-intellectualism in U.S. schools; how gifted education devalues intellect; effects of poverty, sexism, and racism on intellect. (ERIC abstract)

Ford, D., & Harris, J. (1995). Underachievement among gifted African American students: Implications for school counselors. *School Counselor*, 42, 196-203.

Explores issues that negatively affect the academic success of gifted students in general and African American students in particular. Issues of racial identity are discussed in terms of W. E. Cross's (1971) Negro-to-Black Conversion theory that involves 5 steps: pre-encounter, encounter, immersion-emersion, internalization, and internalization-commitment. Recommendations for school counselors are made as they endeavor to ensure the psychological and academic well-being of their students.

Gross, M. (1999). Small poppies: Highly gifted children in the early years. *Roeper Review*, 21, 207-214.

Suggests that gifted children are at risk in schools and the group at greatest risk are the highly gifted. The article explores two issues. First, teachers' lack of awareness of the characteristics and needs of the highly gifted, coupled with the children's own attempts to conceal their ability for peer acceptance, can result in significant underachievement among this group. Secondly, an effective combination of nomination by trained or inserviced teachers, parent nomination, and standardized tests of ability and achievement, can form an effective matrix of identification procedures for young, highly gifted children.

Lawrence, B. & Glenn, C. (1994). *Beware the gifted*. (ERIC Document Reproduction Services No. ED411665)

This paper discusses how elitism and anti-intellectualism have affected the teaching of intellectually gifted students. It examines methods of identifying the intellectually gifted child. It traces trends in education of the gifted through history and discusses the issues of equity, elitism, and anti-intellectualism which have resulted in discrimination against gifted children. The purpose of education is addressed, concluding that an anti-intellectual approach to education has been developed which sees children as a form of capital to be developed rather than allowing them the luxury of developing their minds without a specific or practical purpose. Methods of educating gifted students are outlined, including acceleration, pull-out programs, and homogeneous and heterogeneous grouping. The role of teachers and administrators in educating the intellectually gifted is analyzed. The paper also advocates small schools in which students work with a relatively small number of teachers, with some heterogeneous grouping and some homogeneous grouping in accelerated programs that are relevant to the curriculum. (ERIC abstract)

Piechowski, M. (2003). From William James to Maslow and Dabrowski: Excitability of character and self-actualization. In D. Ambrose, L. Cohen & A. Tannenbaum (Eds). (2003). *Creative intelligence: Toward theoretic integration. Perspectives on creativity*. (pp. 283-322). Cresskill, NJ, US: Hampton Press, Inc.

Connects overexcitability and the intense absorption of experience with the development of the personality toward moral ideals. The author describes these processes as involving five dimensions of development, or channels of information flow, and five levels of development.

Perry, T., Steele, C. & Hilliard, A. (2003). *Young, gifted and black. Promoting high achievement among African-American students*. Beacon Press.

In three linked but separate essays, this book explores how African-American students experience school in a society that has historically devalued their intellectual abilities. It calls for a new understanding of the unique obstacles black students face in American schools and points to a variety of educational practices that can mitigate those challenges and promote academic excellence. The first essay discusses an African-American philosophy forged against such obstacles and capable of addressing them by reading African-American narratives. In the second essay, Claude Steele reports empirical psychological

evidence that when black students believe they are being judged as members of a stereotyped group they do worse on tests. The subtle psychology of "stereotype threat" is analyzed and the implications of research for education are discussed. The final essay, by Asa Hilliard, argues against a variety of false theories and misguided views of African-American achievement and focuses on actual schools, programs, and teachers around the country that allow African-American students to achieve at high levels.(ERIC abstract).

Silverman, L. K. (1999). The universal experience of being out-of-sync. *Advanced Development, 8*, 1-12.

Notes that when giftedness is defined as asynchronous development, it is not limited by ethnic, gender, age, socio-economic, geographical or political boundaries, nor is it dependent upon recognition. In all cultures, there are children who progress through the intellectual milestones at a more rapid rate than their peers. While others look upon the gifted as being advantaged in a race for personal gain, the experience of being different in cultures that value sameness, coupled with acute awareness of the pain and suffering in the world make the gifted feel distinctly disadvantaged. Gifted children do not see themselves as winners of the competition, but bearers of the burden to make this a better world for all. They only actualize their potential when they discover a unique role for themselves which requires their particular gifts.

Steele, C. M. (1997) A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist. 52*, 613-629.

A general theory of domain identification is used to describe achievement barriers still faced by women in advanced quantitative areas and by African Americans in school. The theory assumes that sustained school success requires identification with school and its subdomains; that societal pressures on these groups (e.g., economic disadvantage, gender roles) can frustrate this identification; and that in school domains where these groups are negatively stereotyped, those who have become domain identified face the further barrier of stereotype threat, the threat that others' judgments or their own actions will negatively stereotype them in the domain. Research shows that this threat dramatically depresses the standardized test performance of women and African Americans who are in the academic vanguard of their groups (offering a new interpretation of group differences in standardized test performance), that it causes disidentification with school, and that practices that reduce this threat can reduce these negative effects

### Practice-based References

Ford, D. & Trotman, M. (2000). The office for civil rights and non-discriminatory testing, policies, and procedures: Implications for gifted education. *Roeper Review, 23*, 109-112

This article examines the Office for Civil Rights' (OCR) position on non-discriminatory testing, policies and practices and the role and responsibility of the OCR in securing the civil rights of culturally and linguistically diverse students in the context of gifted education. Possible discriminatory practices in gifted education are outlined. (ERIC abstract).

Grantham, T., & Ford, D. (1998). A case study of the social needs of Danisha: An underachieving gifted African-American female. *Roeper Review, 21*, 96-101.

This case study of a 15-year-old underachieving gifted African-American female was conducted to identify social and emotional needs of gifted students. Data were collected through interviews, field observations, and school data. The authors found that Danisha struggled to accept Caucasian students' social norms and felt isolated in her gifted and talented classes. She wanted to integrate into the gifted classes, yet she didn't want to forfeit her relations with her African-American friends. They suggested that counseling needed to focus on issues related to racial identity; teachers needed multicultural training; and coordinators needed to identify more minority students in classes.

Maker, C. J., Rogers, J. A., Nielson, A. B., & Bauerle, P. R. (1996). Multiple intelligences, problem solving, and diversity in the general classroom. *Journal for the Education of the Gifted, 19*, 437-460.

The DISCOVER project used in America's public schools has as one of its goals to develop curriculum and teaching strategies based on Gardner's Theory of Multiple Intelligences and culturally relevant

content. This study focused on the identification of gifted students by two teachers at different levels of implementation of the DISCOVER project. Two classrooms in Arizona were selected for the study. Latino students who were either English speaking or bilingual represented the majority of both of the classrooms. However, a teacher in one classroom was considered a high-level implementer and the other teacher was considered a middle-level implementer, based on criteria such as the number of years teaching in the DISCOVER project and the results. Results showed a relationship between the teachers' level of implementation and the positive changes in math problem solving and in the number of students identified as gifted. The authors concluded that the results indicated the value of the DISCOVER project in classrooms, specifically those with bilingual students.

## Standard 5: Learning Environments and Social Interactions

### GT5K2

#### Influence of social and emotional development on interpersonal relationships and learning of individuals with gifts and talents.

#### Research-based References

Callahan, C. Sowa, C., May, K. Tomchin, E., Plucker, J., Cunningham, C. & Taylor, W (2004). The social and emotional development of gifted students. (RM04118). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This research monograph on the social and emotional development of gifted students' is divided into four parts. Part 1 of the report focuses on analysis of the literature. Parts 2-4 present results of seven qualitative and quantitative studies of adolescent development. In Part 2, Studies 1 and 2 expand Lazarus and Folkman's cognitive appraisal paradigm to gifted youngsters. This paradigm indicates individuals may problem-solve using process or achievement adjustment. In Part 3 the investigators examine the social and emotional development of two subpopulations. Study 4 used data collected in the qualitative phase of the study to describe how young gifted women cope with adjustment issues. The findings indicate that there are particular traits inhibiting achievement and adjustment in young adolescent females. Part 4 extends the quantitative study of the model and related hypotheses. Study 6 indicates the family cohesion is more related to positive coping strategies than is family adaptability. The final study revealed that academic self-concept was depressed for grade-advanced (accelerated) male adolescents.

Dixon, F. A., Lapsley, D., Hanchon, T. A. (2004). An empirical typology of perfectionism in gifted adolescents. *Gifted Child Quarterly*. 48, 95-106.

We document a typology of perfectionism in a sample of academically talented adolescents and directly examine its relationship to indices of psychiatric symptomatology, adjustment, self-esteem, and coping. Adolescents enrolled in a state-funded residential academy for academically gifted high school students responded to the Multidimensional Perfectionism Scale, the Hopkins Symptom Checklist, the Mastery Coping and Superior Adjustment scales from the Self-image Questionnaire for Young Adolescents, the Perception of Personal Security and Academic Competence scales from the Self-Esteem Index, and the Coping Inventory (COPE). A 2-step cluster analysis of perfectionism scores revealed four clusters: Mixed-Adaptive, Mixed-Maladaptive, Pervasive, and Self-Assured Nonperfectionist. The Pervasive and Mixed-Maladaptive clusters showed a uniformly poor profile of mental health, adjustment, and coping relative to Mixed-Adaptive and Nonperfectionists. The Mixed-Adaptive cluster reported greater academic competence and superior adjustment than did the Nonperfectionist cluster. These results suggest that maladaptive perfectionism takes two forms: pervasive and mixed. Implications for intervention and directions for future research are discussed. (Author abstract).

Gross, M. (2003). *Exceptionally gifted children*. UK: RoutledgeFalmer

This book is a late 20th century account of the development of 15 children above 160 IQ essential to instruct profoundly gifted children. All of the children are Australian. Gross examines indepth the children's developmental and school histories and common characteristics. As well, it identifies educational strategies and adaptations. This book is must reading for anyone raising, teaching,

counseling, or assessing highly and profoundly gifted children.

Landau, E. & Weissler, K. (1998). The relationship between emotional maturity, intelligence and creativity in gifted children. *Gifted Education International*, 13, 100-105.

This study examined the relationships among emotional maturity, intelligence, and creativity in 221 gifted children at a special school in Israel. Emotional maturity was defined as the strength and courage to actualize individual abilities within the frame of social demands. Highly intelligent and emotionally mature children were more creative than less emotionally mature gifted children. (ERIC abstract).

Rogers, K. B. (2002), Grouping the gifted and talented: Questions and answers. *Roeper Review*, 24, 102-107.

This reprinted article originally appeared in *Roeper Review*, 1993, 16(1), 8-12. Addresses 5 questions about the academic, psychological, and socialization effects on gifted and talented learners of grouping for enrichment, cooperative grouping for regular instruction, and grouping for acceleration. The conclusions drawn from 13 research syntheses on these practices conducted in the past 9 yrs are described. These conclusions support sustained periods of instruction in like-ability groups for students who are gifted and talented.

Rogers, K. B., Silverman, L. K. (2001). The physical, social, emotional, and environmental differences of profoundly gifted children: A comparative study. In N. Colangelo, & S. Assouline, (Eds). (2001). *Talent development IV: Proceedings from the 1998 Henry B. and Jocelyn Wallace National Research Symposium on Talent Development*. (pp. 419-423). Scottsdale, AZ, US: Great Potential Press, Inc.

Examined how "different" the profoundly gifted might be from more moderate levels of academic gifts and how qualitatively "different" this population might be from the general population. Data including early childhood development, medical history, interest and pursuits, psychological, social, and intellectual characteristics were collected on 241 children tested with IQs of 10 or higher. The profoundly gifted differ significantly in their emotional/physical sensitivities. They differ significantly in their interests and pursuits. Significant differences were found in family background among the profoundly gifted. It was found that the profoundly gifted tend to be born of considerably older parents who are better educated than both comparison groups. Allergies are significantly more common among the profoundly gifted than for the other 2 comparison samples.

Schuler, P. (2000). Perfectionism and the gifted adolescent. *Journal of Secondary Gifted Education*, 11, 183-196.

The connection between perfectionism and gifted adolescents was examined. Quantitative data about attitudes and behaviors concerning perfectionism were gathered from the Goals and Work Habits Survey, and qualitative data were gathered from semistructured interviews and documentary evidence. Results indicate that perfectionism exists on a continuum of behaviors and thoughts from normal to neurotic. Of the 112 gifted 6th-8th graders in a rural middle school who took the Goals and Work Habits Survey, 87.5% were perfectionistic. Most (58%) were in the healthy range of perfectionism, while (29.5%) were in the neurotic range. Normal perfectionists viewed order and organization as important in achieving their personal best. Neurotic perfectionists, however, were limited by their fixation on making mistakes, which resulted in a constant state of anxiety.

### Literature/Theory-based References

Alsop, G (2003). Asynchrony: intuitively valid and theoretically reliable. *Roeper Review*, 25, 118-127.

This analysis of archival data aimed at finding specific criteria from which a model of asynchronous development might be conceptualized. Within the broader theoretical literature asynchrony can be understood as a developmental and experiential construct. The analysis suggests that greater explanatory power in the study of childhood academic giftedness can be gained from a developmental perspective; the development of enhanced cognitive potential. It is argued that asynchrony implies a developmental trajectory based on chronological age-mental age disparity.

Moon, S. (Ed.) (2004). *GCQ seminal articles. Socio-emotional issues, underachievement, counseling of gifted and talented students*. Thousand Oaks: Corwin Press.

This volume addresses the affective needs of special populations of high-ability students who are at risk of not reaching their full potential. The articles point to the need for more empirical evidence on 'what works' with special populations of gifted students, especially affective and counseling interventions for sub groups of gifted students.

Silverman, L. K. (Ed.) (2000). *Counseling the gifted and talented*. Denver, CO: Love Publishing.

The author examines both the cognitive complexity and emotional intensity of gifted children and discusses the need for modification of counseling techniques. Presented is a developmental model to enable counselors to orchestrate a program of prevention rather than remediation. Specific strategies for individual and group counseling are provided.

Silverman, L. K. (1999), The universal experience of being out-of-sync. *Advanced Development*, 8, 1-12.

Notes that when giftedness is defined as asynchronous development, it is not limited by ethnic, gender, age, socio-economic, geographical or political boundaries, nor is it dependent upon recognition. In all cultures, there are children who progress through the intellectual milestones at a more rapid rate than their peers. While others look upon the gifted as being advantaged in a race for personal gain, the experience of being different in cultures that value sameness, coupled with acute awareness of the pain and suffering in the world make the gifted feel distinctly disadvantaged. Gifted children do not see themselves as winners of the competition, but bearers of the burden to make this a better world for all. They only actualize their potential when they discover a unique role for themselves which requires their particular gifts.

### Practice-based References

Kennedy, D. (1995). Glimpses of a highly gifted child in a heterogeneous classroom. *Roeper Review*, 17, 164-168.

This article reports on the activities and interactions of a highly gifted 9-year-old boy working in a fifth grade classroom with students of mixed ability levels. School modifications to manage gaps between the boy's intellectual development and his social and emotional development took little account of his affective needs, and resulted in limited success in cognitive areas. (ERIC abstract).

Olenchak, R. (1994). Talent development: Accommodating the social and emotional needs of secondary gifted/learning disabled students. *Journal of Secondary Gifted Education*, 5, 40-52.

This discussion uses student cases and a review of the literature to advocate for the development of individual student talent as a philosophical basis for accommodating the social and emotional needs of gifted secondary students with learning disabilities. Descriptions of several educational innovations and reform efforts likely to enhance talent development are included. (ERIC Abstract).

Shaughnessy, M., & Self, E. (1998). *Mentoring emotionally sensitive individuals*. (ERIC Document Reproduction Services No. ED420827)

Mentoring individuals who are gifted, talented, and creative, but somewhat emotionally sensitive is a

challenging and provocative arena. Several reasons individuals experience heightened sensitivity include: lack of nurturing, abuse, alcoholism in the family, low self-esteem, unrealistic parental expectations, and parental pressure to achieve. Alexithymia is defined as a condition in which children do not seem to experience emotions, or the emotions are expressed through physical symptoms (i.e., ulcers, high blood pressure, and headaches). How this condition effects individuals in adulthood is described. Individual differences in sensitivity to feedback may result from learned differences in mental models of the self. This affects the ways in which individuals function. The paper discusses several defensive behaviors of emotionally sensitive individuals and explains how mentors can best respond to them. Eleven specific suggestions for mentors working with this population are provided. Coping skills that mentors can teach to emotionally sensitive people are listed. (ERIC Abstract).

## Standard 5: Learning Environments and Social Interactions

### GT5S1

**Design learning opportunities for individuals with gifts and talents that promote self-awareness, positive peer relationships, intercultural experiences, and leadership.**

#### Research-based References

Bain, S., & Bell, S. (2004) Social self-concept, social-attributions, and peer relationships in fourth, fifth, and sixth graders who are gifted compared to high achievers. *Gifted Child Quarterly*, 48. 167-178

Socially related self-concept, attributions for social success and failure, and peer relationships were investigated for fourth through sixth graders identified as intellectually gifted and a comparison group of high achievers not identified as gifted. The group identified as gifted scored significantly higher on 3 of 4 socially related self-concept subscales ( $p < .01$ ) and on the general self-concept scale ( $p < .05$ ) of the Self-Description Questionnaire-I (Marsh, 1988). On the Student Social Attribution Scale (Bell & McCallum, 1995), an interaction effect was noted, with the group identified as gifted scoring higher than the comparison group on attributions for social success due to ability and effort and lower on attributions for social failure due to ability, effort, and task difficulty. Though teachers' ratings of peer relationships yielded no differences between the 2 groups, boys across groups were rated significantly higher than girls ( $p < .05$ ).

Cameron, P. (1995). The social context and developmental patterns of crystallizing experiences among academically talented youth. *Roeper Review*, 17, 197-200.

This study examined the social context in which crystallizing experiences (experiences which solidify the individual's awareness of some aspect of the self) occurred among 422 gifted adolescents. Results found that most crystallizing experiences took place in public settings, were related to personal achievement, required no conscious self-initiative, and involved interaction with another person. (Author abstract).

Colangelo, N., Assouline, S. & Gross, M. (2004). *A nation deceived: How schools hold back America's brightest students*. Volume II. Iowa City, Iowa: University of Iowa.

This publication provides a bed rock of research to demonstrate the powerful and positive impact of different types of acceleration (early admission, grade skipping, subject matter acceleration, curriculum compacting, correspondence courses, advanced placement and dual enrolment) on different types of gifted learners. The annotated bibliography (pp.129-165) is particularly helpful as it is organized by type of research (e.g. survey/interview, case studies, experimental/correlational; longitudinal), meta-analytic studies, literature review, thought pieces, international studies as well as validation studies.

Karnes, F. (1995). Perceptions of leadership held by young females. *Journal of Secondary Gifted Education*, 6, 113-119.

Participants (n=50) in a Mississippi leadership program for female high school juniors and seniors reported that family members provided the greatest influence, student government provided the greatest opportunities, shyness was the biggest obstacle, and Jesus Christ was the greatest leader. They did not

believe that popularity was a prerequisite to leadership or that males make better leaders.(ERIC abstract).

Smyth, E., & Ross, J. (1999). Developing leadership skills of pre-adolescent gifted learners in small group settings. *Gifted Child Quarterly*, 43, 204-211.

A study explored leadership behavior of 58 gifted elementary learners working in small groups. Using videotape analysis and a model of transformational leadership, the study diagnosed leadership needs of gifted learners and created successful instructional interventions to enable students to transfer skills developed in a teacher-directed lesson to other settings. (ERIC abstract).

### Literature/Theory-based References

Brody, L. (1999). The talent searches: Counseling and mentoring activities. In N. Colangelo & S. Assouline (Eds.) (1999) *Talent development III, Proceedings from The 1995 Henry B. and Jocelyn Wallace national research symposium on talent development*. (pp.153-157). Great Potential Press, Inc.

Outlines counseling and mentoring efforts underlying the talent search process. It also covers the strategies designed to help academically talented students identify, broaden and nurture their gifts. It also covers some of the other education options open to highly intelligent students.

Pleiss, M. K., & Feldhusen, J. F. (1995). Mentors, role models and heroes in the lives of gifted children. *Educational Psychologist*, 30, 159-169.

Gifted children can benefit from relationships with adults who are successful in their areas of interest. These adults may be present in children's lives as mentors, role models, or heroes and heroines. The relationships that develop range from close, interactive partnerships to admiration or imitation of public figures. This review examines the literature dealing with mentorships, mentor programs for gifted students, the use of role models in gifted education, and the heroes of gifted children as compared to those of the general population. The conclusions drawn from literature in these areas have a number of implications for further research and for the field of gifted education. (Author)

Torrance, E. Paul. (1984). *Mentor relationships: How they aid creative achievement, endure, change and die*. Buffalo, NY: Bearly Limited.

The author discusses the importance of a student's relationship with a mentor and highlights the benefits of mentoring in regard to a student's personal growth. Discusses the mentoring relationship in terms of the positive benefits it produces. Documents how mentor relationships develop and grow as well as the differences between people who have mentors and those that do not. Concludes that mentors do make a difference and gives suggestions for what mentors can do to guide gifted and creative youths.

### Practice-based References

Feldhusen, J. F., & Kennedy, D. M. (1988). Preparing gifted youth for leadership roles in a rapidly changing society. *Roeper Review*, 10, 226-230.

This article described five components of a leadership education: (a) experience in predicting, planning and extrapolating; (b) explicit leadership training; (c) thinking skills; (d) experience in problem finding and problem solving; and the (e) study of major concepts, themes, issues, and ideas. Along with leadership education, the authors emphasize the need for a comprehensive program that included a study of foreign languages; mentoring experiences with leaders; early mastery of knowledge in the major disciplines; experience in goal setting, formulating objectives, and planning; the examination of values, ethical principles and philosophical systems; and early identification of special talents.

Hensel, N. H. (1991). Social leadership skills in young children. *Roeper Review*, 14, 4-6.

To determine how schools might provide opportunities for children to develop social sensitivity, the authors studied four and five year old gifted preschool and kindergarten children. After introducing a series of role-playing and problem solving activities that attempted to sensitize the children to others' perspectives, the children's behavior was observed on the playground in classroom activities. The authors also administered the Peabody Picture Vocabulary Test (PPVT) and a sociogram (Perez et al., 1982). Children who scored high on the PPVT also scored high on the sociogram providing validation for

the influence of verbal skills on peers. These children also exhibited more leadership characteristics in their dramatic play. They recommend some strategies that teachers may use in developing leadership and prosocial characteristics in children: focusing on different viewpoints; modeling caring behaviors; discussing alternative ways of handling problems; helping children learn to make decisions; helping children develop interactive skills; and helping children learn to talk about their feelings and ideas.

Johnson, K. (2000). Affective component in the education of the gifted. *Gifted Child Today*, 23, 36-40.

Discussion of the need to include affective components in the education of gifted students considers: development of interpersonal and emotional intelligence, the need for an affective curriculum component, the role of the teacher to address the social and emotional needs of gifted students, and inclusion of affective learning in multidisciplinary projects and service activities. (ERIC abstract)

Merriman, J. (1999). Leadership conference. *Gifted Child Today*, 22, 18-27.

Describes a dynamic, innovative leadership conference that meets the needs of leadership training for gifted secondary students. The conference provides an opportunity for underachieving gifted students to excel, and for gifted students to design, develop, and implement the entire conference while having fun and experiencing success. (Author abstract).

Ross, J., & Smyth, E. (1995). Differentiating cooperative learning to meet the needs of gifted learners: A case for transformational leadership. *Journal for the Education of the Gifted*, 19, 63-82.

Observations of interactions of mixed-ability groups revealed three persistent challenges (inclusiveness, enacting the ideal, and monitoring growth) in which gifted students can develop and exercise leadership skills. Specific student strategies are proposed for each challenge. The role of teachers in developing leadership skills of gifted learners is also addressed. (Author abstract).

## **Standard 5: Learning Environments and Social Interactions**

### **Gifts and Talents**

#### **GT5S2**

**Create learning environments for individuals with gifted and talents that support self-efficacy, leadership, and lifelong learning.**

#### **Research-based References**

Davalos, R.A., & Haensly, P. A. (1997). After the dust has settled: Youth reflect on their high school mentored research experience. *Roeper Review*, 19, 204-207.

This study investigated the perceived value (after several years) of a year-long independent study/mentorship course provided to 90 gifted high school students. Respondents reported that the course had improved their self-esteem; that the mentor was a significant influence and helped in "real life" learning; and that the course helped in career exploration, improving work skills, and preparing for college. (ERIC abstract).

Swiatek, M. (2002) A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review*, 24, 141-144.

Presents the results of academic acceleration (ADA) studies performed as part of the Study of Mathematically Precocious Youth, a program that intellectually challenges highly gifted adolescents. Results from 3 cohorts of Ss (identified from 1972 to the present) and controls consisting of non-ADA gifted students indicate that Ss who choose ADA do not suffer academically as a result of the decision, and do gain speed in their education preparation. In addition, the concerns that Ss suffer gaps or

weaknesses in what they learn in ADA, and that they "burn out" on academics, are not supported. Research on the psychosocial aspects of ADA show no differences between ADA and non-ADA Ss in locus of control and in number of other pursuits, and only minute differences in self-esteem.

VanTassel-Baska, J., Feng, A., Quek, C., & Struck, J. (2004). A study of educators and students' perceptions of academic success for underrepresented populations identified for gifted programs. *Psychology Science*, 3, 363-378.

This article presents a study of the perceptions of teachers, program coordinators,, and students on the adjustment and impact after two years' placement of students identified through performance-based assessments in gifted programs, many of whom were low income and minority students in one state. Survey data, focus group data, and interviews were used as the tools of choice for collecting data. All groups concurred that gifted program participation was beneficial in the areas of enhancing self confidence, developing stronger communication skills, and learning to think in different ways. On the whole, students were well-motivated and showed evidence of growth in the gifted program curriculum over the two year period.

### Literature/Theory-based References

Betts, G. (2004), Fostering autonomous learners through levels of differentiation. *Roeper Review*. 26, 190-191.

A major goal of the education of the gifted and talented is the development of the student as an independent, self-directed life-long learner. The concepts of curriculum differentiation and instruction have been evolving through theory and practice. Questions concerning ownership of differentiation have been asked by educators, parents, and students. Many educators and parents believe that it is the responsibility of the school to develop the ultimate differentiated curriculum. However, many of the gifted believe that the highest level of learning is self-developed, with the support, trust, respect, and facilitation of educators, parents, and mentors. There are three levels of curriculum: 'Prescribed Curriculum and Instruction', 'Teacher-Differentiated Curriculum' and 'Learner-Differentiated Curriculum', that must be considered when addressing the question of whether the responsibility for differentiated instruction lie primarily with the student or the teacher.

Cooper, H. (2001). *Summer school: Research-based recommendations for policymakers*. SERVE Policy Brief. (ERIC Document Reproduction Services No. ED456557)

This policy brief reviews research on the effectiveness of summer-school programs. A meta-analysis of 13 studies brings to light the effects long summer breaks have on students, such as the loss of 1 month on achievement test scores, and the significant loss of math and spelling skills. A history of summer school and summer-school goals follows. Goals include preventing delinquent behavior, remediating or preventing learning deficits, helping to meet minimum competency requirements, breaking the poverty cycle, and accelerating progress for gifted students. A review of research on summer school's effectiveness follows, which demonstrates a dominantly positive effect on students. The brief concludes with recommendations that policymakers should continue to fund summer-school programs, require that funds for summer school be spent on mathematics and reading instruction, and set aside funds for the purpose of fostering participation in summer programs, especially by disadvantaged students.

Maxwell, E. (1998). "I can do it myself!" reflections on early self-efficacy. *Roeper Review*, 20, 183-187

Gifted children are, at an early age, self-directed in acquisition of knowledge. Gifted children may also develop a sense of self at an earlier age. Three areas in which self-efficacy is display include intellectual, emotional and volitional. In later years this is visible though the combination of self-awareness and intelligence.

Olszewski-Kubilius, P. (1998). Early entrance to college: Students' stories. *Journal of Secondary Gifted Education*, 10, 226-247.

Presents essays that describe the fears, anxieties, hopes, problems, and triumphs of 11 students who chose to go to college early. Difficulties faced included initial academic failures due to immaturity and a lack of well-developed study skills; however, overall achievement was high and the experience was

perceived as positive. (ERIC abstract).

Renzulli, J. (1992) A general theory for the development of creative productivity through the pursuit of ideal acts of learning. *Gifted Child Quarterly*, 36, 170-183.

This article presents a general theory for developing creative productivity in young learners by examining the interactions between and among the learner, the curriculum, and the teacher. Further interactions within the learner dimension of the theory are examined by analyzing the relationships between and among learners' abilities, interests, and learning styles. Teacher interactions are examined by analyzing teachers' knowledge of the discipline that they are teaching, instructional techniques, and the teachers' 'romance' with the discipline. The curriculum is examined by analyzing the structure of disciplines, the content and methodology of disciplines, and the discipline's appeal to the imagination of students. Also proposed is a three-dimensional research paradigm for examining creative productivity: (a) the types of creativity we are attempting to develop, (b) the domains in which creative pursuits are carried out, and (c) the contextual variables that influence the creative process.

Rotigel, J., & Lupkowski-Shoplik. A. (1999). Using talent searches to identify and meet the educational needs of mathematically talented youngsters. *School Science and Mathematics*, 99, 330.

The role talent searches have played in the education of gifted mathematics students is examined, focusing on the history of the program and its academic and social implications. Topics include the creation of the talent search by researchers at Johns Hopkins University, benefits students receive by participating in a talent search, and how schools use the talent search.

### **Practice-based References**

Boothe, D., Sethna, B., Stanley, J. C., & Colgate, S. (1999). Special opportunities for exceptionally able high school students: A description of eight residential early-college entrance programs. *Journal of Secondary Gifted Education*, 10, 195-202.

Describes eight innovative four-year and two-year residential college programs that allow exceptionally able high school students early entrance to college. Programs are compared in terms of admission requirements, tuition, curricula, residential components and requirements, enrichment and leadership activities, gender restriction, and grade of entry. (Author abstract).

Gallagher, S. (1997). Problem-based learning: Where did it come from, what does it do, and where is it going? *Journal for the Education of the Gifted*, 20, 332-362.

Review of problem-based learning (PBL) finds that innovation is comprised of four elements: an ill-structured problem, substantive content, student apprenticeship, and self-directed learning. Research evidence suggests that PBL is better than traditional instruction on long-term information retention, conceptual understanding, and self-directed learning. Application of the method in classes for gifted students is addressed. (ERIC abstract).

Riley, T., & Karnes, F. (1998). Demonstrating creativity in the arts through competitions. *Journal of Secondary Gifted Education*, 10, 248-251.

Discusses the connection between creativity in the arts and competitions, and shares a sampling of competitions that might entice secondary students to maximize their creative abilities. The benefits of competitions are described; they include the opportunity for students to enhance self-directed learning skills and their sense of autonomy. (ERIC abstract).

Schulthes, D. & Wolosky, J. (1998). Developing each child's potential: The discovery program. *Gifted Child Today*, 21, 42-45.

Describes a middle school program that focuses on creating educational experiences that foster life-long learning for all students. The Discovery Program provides a range of differentiated teaching/learning activities, including research competitions, language-arts studies, social-action projects, art exhibitions, mathematics projects, and technology training. (Author abstract).

## Standard 5: Learning Environments and Social Interactions

### GT5S3

**Create safe learning environments for individuals with gifts and talents that encourage active participation in individual and group activities to enhance independence, interdependence, and positive peer relationships.**

#### Research-based References

Albert, R. & Runco, M. (1989). Independence and the creative potential of gifted and exceptionally gifted boys. *Journal of Youth and Adolescence*, 18, 221-230.

A 16-item questionnaire concerning independence and three divergent thinking tests were administered to three groups of preadolescent boys and their mothers as part of an ongoing longitudinal investigation of exceptional giftedness. The subjects included one group of exceptionally gifted boys with IQs in excess of 150 (n = 28), a second group of exceptionally gifted boys selected for their math-science abilities (also well within the 99th percentile; n = 26), and a control group of gifted boys (n = 37), with a mean IQ of 133). The three groups were compared with one another in terms of (a) their own independence ratings, (b) their mothers' independence ratings, (c) correlations of boys' and mothers' independence ratings, and (d) correlations of independence ratings with IQ and scores from the divergent thinking tests. Results indicated significant differences among the three groups of mothers, and significant differences between the two exceptionally gifted groups and the control group.

Dunn, R. (1990). Grouping students for instruction: Effects of learning style on achievement and attitudes. *Journal of Social Psychology*. 130, 485-94.

Presents findings of a 1988 study of 104 middle school students, examining the relationship between learner style preference and instructional grouping. Identifies preference groups: learning alone, learning with peers, or no preference. Finds that students performed equally well on four social studies lessons when instructional strategy matched learner with preferred learning style. Suggests that grouping may influence no-preference students.

Kulik, J. A., & Kulik, C. C. (1992). Meta-analytic findings on grouping programs. *Gifted Child Quarterly*, 36, 73-77.

The researchers used a meta-analysis to reexamine findings on grouping from research that has been conducted and reported since 1916. The authors found that academic and other effects reported in the literature appear to be a function of the program type. Academic gains seem to be a directly influenced by degree of curricular adjustment. They go on to note that the student self-esteem in relation to grouping is not influenced in either direction, contrary to the research findings of other researchers. Meeting the needs of gifted students through grouping is an appropriate and necessary function of the school system.

#### Literature/Theory-based References

Bernal, E. (2003). To no longer educate the gifted: Programming for gifted students beyond the era of inclusionism. *Gifted Child Quarterly*, 47, 183-191.

For many educators, the goal of programs for the gifted is "the education of identified gifted students." This article argues that this goal makes gifted and talented (GT) programs vulnerable to discontinuation and relegates gifted children to inclusionary, regular classrooms where their needs are rarely met. To avoid these possibilities, the goal of GT should be reformulated to "the development of gifted young adults." This goal has several advantages, including the possibility of a more enriched curriculum and a more diverse group of children with higher creative-productive potential. It also includes the overt recognition that these children require both differentiated instruction and specialized guidance to acquire a measure of expertise, establish a strong sense of self, and make personally satisfying career choices. The Growing Giftedness model presented would have GT students work more closely with adults and with one another than the inclusionary model or part-time gifted programs can allow. In addition, this model adumbrates the elements of a full-time program.

Christophersen, E., & Mortweet, S. (2003). Encouraging independent play skills. In Christophersen, R & Mortweet, S. *Parenting that works: Building skills that last a lifetime*. (pp. 195-205). Washington, DC, US: American Psychological Association.

"Independent play skills" refers to a child's ability to entertain himself for extended periods of time without any help from an adult. Children with well-developed independent play skills derive enjoyment simply from their activities, with no need or expectation of the involvement of others or an external reward. Independent play skills enable children to do long homework assignments, to work in their seats at school, to complete independent projects, to read a long book, and to master a hobby or talent. In addition to developing a child's ability to concentrate, stick with tasks, and enjoy time alone, independent play skills also have other benefits for the child and her parents. Children with independent play skills usually play better with other children than those who do not. This chapter describes how parents can encourage the development of independent plays skills in their children. The authors provide general guidelines as well as age-specific suggestions from infancy through school age.

Grant, B. & Piechowski, M. (1999). Theories and the good: toward child-centered gifted education. *Gifted Child Quarterly*, 43, 4-12.

Educators tend to look to theories for ideas on how to educate gifted children. The most important value in gifted education, we argue, should be child-centeredness. Theories can serve this value by helping us to understand the perspective of a gifted child. Most models and theories (Maslow's and Dabrowski's being the primary exceptions) address the conditions that promote gifted achievement and do not illuminate the inner life of gifted children. And yet, the pressure to achieve often has negative consequences for the emotional well-being of the child. Roeper's education for self-actualization and interdependence offers an approach to gifted education that respects the inner life of gifted children and assists them in finding their own way in life.

Grybe, D. (1997). Mentoring the gifted and talented. *Preventing School Failure*, 41, 115.

Gifted children often exhibit high potential in areas of academic, creativity, leadership, and intellect. Current research shows that previous models of identifying gifted children or adults were inadequate. However, the expansion of those models to cover other areas such as analytical, creative, and practical has led to uncovering of the needs, risk factors, and intervention methods. Students cite "opportunities to work on my own," "working on projects that my high school can't offer," and "working with professors and graduate students" among the advantages of the program. These opportunities to established informal mentoring relationships are invaluable, particularly as students move from high school into higher levels of training.

Johnsen, S., & Goree, K. (2005). Teaching gifted students through independent study. In F. Karnes & S. Bean (Eds.). (2005). *Methods and materials for teaching the gifted and talented*. (pp.379-408). Waco, TX: Prufrock Press Inc.

Independent study helps student create a lifelong love affair with learning. In addition to a description of a few independent study models, the authors provide a set of guidelines for independent study and describe nine steps that might be used in independent study and research. The chapter ends with a list of teacher resources.

### **Practice-based References**

Bishop, K. (2000). The research process of gifted students: A case study. *Gifted Child Quarterly*, 2000, 44, 54-64.

This case study investigated the research processes and authentic learning experiences of 10 junior high students as they completed independent research projects in a class for gifted students. Students experienced the most difficulty in exploring and forming a focus. Although students used a variety of information resources, they did not access some available information sources and, in some cases, experienced difficulty extracting relevant information. The professional services of public and school librarians were not utilized to assist in the research project. Only 3 of the 10 gifted students demonstrated

all of the characteristics of authentic learning in their final products. Suggestions are made on how to alter the process to make independent research projects produce more authentic learning experiences.

Cross, T., Stewart, R. A., & Coleman, L. (2003). Phenomenology and Its Implications for Gifted Studies Research: Investigating the Lebenswelt of Academically Gifted Students Attending an Elementary Magnet School. *Journal for the Education of the Gifted*, 26, 201-220.

Fifteen gifted students (grades 1-6) in a magnet school participated in phenomenological interviews. The students described the social milieu of the school as the backdrop for the meaning of the experience of attending the school. Four themes emerged across magnet school experiences, others, role, personal development, and time. What appealed to students were the quality of teachers, freedom to pursue areas of interest, and the challenge of fast pace and complexity of work. They also reported experiencing less, and being less affected by teasing and ridicule of others.

Hughes, L. (1999). Action research and practical inquiry: How can I meet the needs of the high-ability student within my regular education classroom? *Journal for the Education of the Gifted*, 22, 282-297.

Using data collected from student questionnaires, parent interviews, classroom observations, and teacher-student portfolio conferences, this fourth-grade-teacher-identified activities for her high-ability students: differentiated instruction, student choice, flexible groupings, and mixed enrichment with acceleration. The teacher reported that using these strategies, students were not doing the same thing, were not "stuck" in the same group all year, were able to make choices that matched their interests and abilities, enjoyed enrichment and acceleration, and reported a positive classroom atmosphere.

Mackin, J. (1995). The science of a team approach: Coaching gifted and talented students to work cooperatively in completing scientific research. *Gifted Child Today*, 18, 14-17, 42.

Students talented in science were offered an opportunity to use community research facilities and to conduct scientific research in an independent study course at Avon Grove High School in Kemblesville, Pennsylvania. The course involved peer collaboration, cooperative learning, the teacher as mentor, research papers, and oral presentations. (ERIC abstract).

Roeper, A. (1992). Global awareness and the young child. *Roeper Review*, 15, 52-53.

Annemarie Roeper describes "global awareness" as "an attitude, a mind set, a way of seeing ourselves as an integral part of every aspect of the world" (p. 52). Since Roeper views a competitive world as isolating, she suggests that young children learn the importance of interdependence and learning in communities, focusing on the qualitative differences among people to encourage communication and cooperation.

Schillereff, M. (2001). Using inquiry-based science to help gifted students become more self-directed. *Primary Voices K-6*, 10, 28-32.

Observes that the tendency to question pushes some gifted students toward self-directed inquiry and supports their academic talent. Considers ways to nurture all students, especially the ones who don't question much on their own. Explores the author's experience in guiding her students toward becoming self-directed learners and guiding them to take more ownership of the learning process.(ERIC abstract).

Terry, A. W. (2000). An early glimpse: Service learning from an adolescent perspective. *The Journal of Secondary Gifted Education*, 11, 115-135.

The purpose of this study was to examine the effects of service learning on three students who participated in Community Action Projects. The projects related to restoration of historical buildings and the development of a solid waste management plan. The author identified five themes from their case studies. First, they learned a method for involving themselves in service learning. Next, they learned that a positive attitude was important. Third, they learned how to work with people and cooperation. Fourth, they learned commitment through engagement in the community. Finally, they became empowered—"kids can make a difference!"

## Standard 5: Learning Environments and Social Interactions

### GT5S4

**Create learning environments and intercultural experiences that allow individuals with gifts and talents to appreciate their own and others' language and cultural heritage.**

#### Research-based References

den Brok, P., Levy, J., Rodriguez, R., & Wubbels, T. (2002). Perceptions of Asian-American and Hispanic-American teachers and their students on teacher interpersonal communication style. *Teaching and Teacher Education*, 18, 447-467.

The study investigated the relationship of teacher and student ethnic background to their perceptions of teacher interpersonal behavior. It is theoretically linked to research on multicultural education and teacher interpersonal communication styles. Perceptions of 27 Asian-American and Hispanic-American teachers and their students in culturally diverse high schools were gathered by means of questionnaires and structured interviews. Teachers had more favorable perceptions of their own behavior than their students did. Student and teacher ethnic background had a small but significant impact on students' perceptions of their teachers. Interview data provided some evidence that concepts studied in relation to the cultural dimensions of communication, such as respect from students, closeness, and identification of students with their teachers, are helpful in explaining the relationship between ethnic background and perceptions of students and teachers. The results merit further research into the effects of culture on perceptions and provide recommendations for improvements in culturally responsive education.

Gonzalez, V. (2005). Cultural, linguistic, and socioeconomic factors influencing monolingual and bilingual children's cognitive development. In Gonzalez, Virginia (Ed); Tinajero, Josefina (Ed). (2005). *Review of research and practice, Vol 3*. (pp. 67-104). Mahwah, NJ, US: Lawrence Erlbaum Associates, Publishers.

This study illustrates the effect of cultural, linguistic, socioeconomic status (SES), and developmental factors on young minority and majority children's cognitive development. The objective is to study developmental, SES, and linguistic factors affecting the performance of three groups of young children (i.e., monolingual mainstream, monolingual Hispanic, and bilingual Hispanic) in an alternative assessment of cognition and language (i.e., the Qualitative Use of English as Spanish Tasks, QUEST). Results showed the presence of a major pattern indicating that SES, developmental (age), linguistic and cultural factors significantly influence monolingual and bilingual children's verbal and non-verbal concept formation processes. The most important theoretical contribution was the empirical validation of a complex revised model showing: (1) support for the complex interaction of cognitive, linguistic, and cultural factors influencing verbal and non-verbal concept construction processes and (2) similarities and differences between monolingual and bilingual children, in comparison to previous findings.

#### Literature/Theory-based References

Banks, J. A., & Banks, C. M. (Eds.). (2004). *Handbook of research on multicultural education* (2<sup>nd</sup> ed.). San Francisco: Jossey-Bass.

An invaluable landmark publication written and reviewed by distinguished and recognized scholars in multicultural education. It is a conceptual, theoretical, and methodological testimonial to the powerful emergence of a critically important metadiscipline with wide-reaching social, educational, and political implications. All educators, educational administrators, professors, and students involved in learning and teaching, as well as those in multicultural education, ethnic studies, bicultural education, bilingual education, and race relations, will appreciate the contributions of this resource. The handbook is 1,065 pages long and contains 47 chapters in 11 parts. The authors are accomplished experts in areas such as history, ethnic studies, women studies, and social and behavioral sciences. Part 2 of the Handbook deals with research methodologies and research issues and points to the dearth of research involving minority students attending schools in the United States.

Bernal, E. (2002). Three ways to achieve a more equitable representation of culturally and linguistically different students in GT programs. *Roepers Review*, 24, 82-88.

The question of the underrepresentation of nondominant ethnic groups (1) of children in programs for the gifted and talented (GT) has been discussed in GT educational circles for over 35 years in dozens of special conferences and countless local workshops. Many ways have been suggested for correcting this problem by individual scholars and practitioners who believe that minority children too often are overlooked or fail to be identified because they lack a few points on the requisite IQ or achievement tests, or because their abilities are unrecognized by the educators who must nominate them in the first place (Bernal, 1994). These children demonstrate exceptional abilities, albeit often in ways that only their respective cultures prize and cultivate (Sternberg, 1990). This article presents three solutions to the continuing problem of minority underrepresentation in programs for the gifted.

Ford, D., & Harris, J. (2000). A framework for infusing multicultural curriculum into gifted education. *Roepers Review*, 23, 4-10.

In 1996 and 1997, Ford, Grantham, and Harris wrote about the need to bridge the fields of gifted education and multicultural education. We maintained then (as we do now) that both fields offer great promise for meeting the needs of our student population as it is now and will be in the future - diverse. This article is a follow-up to the earlier articles. In this article, we continue the discussion of why gifted education must be multicultural. We also provide a framework and strategies for designing multicultural gifted education curricula. The ideas, strategies, and framework appear in more detail and depth in Ford and Harris (1999).

In writing this article, the authors listened to students, specifically Black students, express their concerns about the lack of diversity in the curriculum. As part of a larger study, Ford (1995) interviewed 43 gifted Black students in grades 6 through 9 about their curricular needs and concerns. Specifically, 41% of the students agreed or strongly agreed that I get tired of learning about White people in class; 87% agreed or strongly agreed that I get more interested in school when we learn about Black people; and all students supported the statement I want to learn more about Black people in school.

Ford, D. Y., & Trotman, M. F. (2001). Teachers of gifted students: Suggested multicultural characteristics and competencies. *Roepers Review*, 23, 235-239.

Discusses multicultural characteristics and competencies related to teaching culturally and ethnically diverse gifted students. Gifted teachers should possess self and cultural awareness and understanding. They should be socially responsive and responsible, and employ culturally sensitive techniques and strategies. Culturally responsive teachers respect students' primary language and conduct culturally sensitive assessments. Culturally responsive classrooms should make use of culturally relevant, equity, and holistic pedagogies. Gifted teachers should employ a communal philosophy and recognize that knowledge is subjective, value-laden, and reciprocal between students and teachers. Culturally responsive schools employ a diverse teaching staff. Positive relationships between students, teachers, and families are critical. (PsycINFO Database Record)

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53, 106-116.

The specific components of this culturally responsive approach to teaching are based on research findings, theoretical claims, practical experiences, and personal stories of educators researching and working with underachieving minority students. Culturally responsive teaching is defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively. It is based on the assumption that when academic knowledge and skills are situated within the lived experiences and frames of reference of students, they are more personally meaningful, have higher interest appeal, and are learned more easily and thoroughly. As a result, the academic achievement of ethnically diverse students will improve when they are taught through their own cultural and experiential filters.

Soto, L. D., Smrekar, J. L., & Nekkovei, D. L. (1999). Preserving home languages and cultures in the classroom: Challenges and opportunities. *Directions in Language and Education*, 13.

Decades of research document the powerful academic and socio-affective benefits of a strong home language base and affirmation of home language and culture as a valuable resource. This article explores the implicit challenges, daily realities, opportunities, and practical implications of incorporating language and culture into classrooms as they relate to culturally and linguistically diverse language learners. It describes the daily realities faced by teachers, students, families, and communities, and then offers

practical advice for all classroom educators. (ERIC abstract).

### Practice-based References

Ford, D., Tyson, C., Howard, T., & Harris, J. J. (2000). Multicultural literature and gifted black students: promoting self-understanding, Awareness, and pride. *Roeper Review*, 22, 235-240.

This article focuses on recommended literature for gifted black and other minority students. The use of bibliotherapy with gifted students is described and recommendations are presented for using multicultural literature, along with guidelines for selecting high quality multicultural literature. (Author abstract).

Poelzer, G. H., & Feldhusen, J. F. (1997). The international baccalaureate: A program for gifted secondary students. *Roeper Review*, 19, 168-171.

The authors provide a history of the IB Program from its inception in Europe to its initiation in North America. The IB diploma provides high academic standards that are recognized throughout the world. The curriculum emphasizes the “whole man” and has both breadth and depth. One of the IB examiners has found that students focus on theme-based problems that are “significant to themselves and to the social or cultural context” (p. 171).

Robbins, R., Tonemah, S., & Robbins, S, (2002). Project Eagle: Techniques for multi-family psycho-educational group therapy with gifted American Indian adolescents and their parents. *American Indian and Alaska Native Mental Health Research*, 10, 56-74.

A culturally relevant group therapy model for gifted American Indian students and their parents uses non-didactic facilitation to focus on cultural identity, play, self-disclosure, parental involvement, silence, cognitive processing, emotional expression, and social responsibility. Evaluation results indicate the program builds self-esteem, pride in Native heritage, parent-child bonding, and leadership potential. (ERIC abstract).

Tookey, M. E. (1999/2000). The international baccalaureate. *The Journal of Secondary Gifted Education*, 11, 52-66.

The author discussed how the features of the International Baccalaureate program creates a school climate and culture that nurtures excellence, establishes a task-orientation, values diversity, challenges the whole student, provides opportunities for individual work, and develops motivation. The IB subject areas emphasize a “different way of knowing, a different way of viewing and acting in the world, and different skills” (p. 53). It includes these features: breadth, depth, direct experience and action, reflection, international aspects, and a criterion-referenced assessment system. Internationally, the curriculum for each subject is developed by a committee composed of representatives from various countries and educational systems and reflects international concerns. The diploma is a credential for admission to universities all over the world.

Wolfgang, A. (1991). Intercultural training of teachers and counselors for the year 2000. *Gifted International*, 7(1), 33-36.

The author recommends that teachers take a global outlook and adapt a futuristic approach because of changing demographics, particularly increasing immigration. Teachers should learn about the differences and similarities across cultures from the students and their parents. Nonverbal, cultural, and universal fluencies that affect intercultural communication and academic learning need to be understood by the classroom teacher.

## Standard 5: Learning Environments and Social Interactions

### GT5S5

**Develop social interaction and coping skills in individuals with gifts and talents to address personal and social issues, including discrimination and stereotyping.**

### Research-based References

Coleman, M. (2001). Surviving or thriving? Gifted middle school boys with learning disabilities. *Gifted Child Today*, 24, 56-63.

Study of 21 boys with learning disabilities. Schools and parents need to collaborate in implementing strategies that support gifted students with learning disabilities. Professional development should focus on individual programming that incorporates flexible instructional approaches and adaptations suggested by these 21 learning disabled boys and researchers. Once these exceptional students are understood and curriculum modifications are consistently implemented, gifted students with learning disabilities will do more than survive, they will thrive and some may even become men of eminence.

Lovecky, D. (1995). Ramifications of giftedness for girls. *Journal of Secondary Gifted Education*, 6, 157-164.

Gifted girls (n=30) who participated in psychotherapy tended to focus on either social relationships or achievement. Girls who focused on achievement tended to be the brightest and exhibited the cognitive styles of divergent thinking, integrative thinking, or perceptive thinking. These girls also tended to exhibit problems dealing with peers and adults. (ERIC abstract).

Swiatek, M., & Dorr, R. (1998). Revision of the social coping questionnaire: Replication and extension of previous findings. *Journal of Secondary Gifted Education*, 10, 252-259.

An expansion of the Social Coping Questionnaire was used to investigate how 229 gifted students (ages 11-17) coped with being identified as gifted. Results found five social coping factors: denial of giftedness, emphasis on popularity, peer acceptance, social interaction, and the hiding of giftedness. Females were more likely to deny abilities. (ERIC abstract).

### Literature/Theory-based References

Betts, G., & Neihart, M. (1988). Profiles of the gifted and talented. *Gifted Child Quarterly*, 32, 248-253.

After several years of observations, interviews, and reviews of literature, the authors have developed six profiles of gifted and talented children and youth. These profiles help educators and parents to look closely at the feelings, behaviors, and needs of the gifted and talented. Also, tips on identification of each profile are included as well as information on facilitating the gifted and talented in the school and home.

Colangelo, N., & Davis, G. (Eds.) (2003). *Handbook of gifted education*. (3<sup>rd</sup> ed). MA: Allyn & Bacon

The diversity of articles in this volume includes all the hot topics of gifted education written by some of the best known experts in the field. Part V on Psychological and counseling services examines concepts related to counseling of gifted individuals and their families, and issues of motivation, underachievement and emotional giftedness. Part VI on various populations of gifted students looks at the challenges involved in identifying, understanding and meeting the educational and socio emotional needs of diverse groups of gifted learners.

Frasier, M. (1993). Issues, problems and programs in nurturing the disadvantaged and culturally different talented. In K. A. Heller & F. J. Monks et al (Eds). (1993). *International handbook of research and development of giftedness and talent*. (pp. 685-692). Elmsford, NY, US: Pergamon Press, Inc.

What has research told us about the identification and education of talented disadvantaged and culturally different children; what has been the nature of practices designed to find and educate them; what are some research initiatives and implications for future research and development activities; addresses these questions through a review of relevant research and practice; focuses on characteristics of talented children in either or both groups and descriptions of conditions that affect their display of talents; focuses on issues and problems related to the use of tests to determine eligibility for talent development programs; [discusses] programs and curricula designed to address the educational needs of talented disadvantaged and culturally different children; provides suggestions for future research and development.

Kerr, B., & Cohn, S. (2001). *Smart boys: Talent, manhood, and the search for meaning*. Scottsdale, AZ: Great Potential Press.

This book explores issues faced by gifted boys and men and the concerns of those around them. Section 1, "Giftedness and Masculinity," explores the relationship of special intellectual ability to the role of males in our society. The findings of a study on the male graduates of the accelerated learning class of 1969 are used as a cautionary tale. Although these men were successful by ordinary standards, many did not fulfill their dreams and most had great difficulty in relationships. In the next section, "Milestones and Danger Zones," chapters 4 through 6 journey through the growing years of the gifted boy, from childhood to manhood, describing those issues that are unique to gifted boys. In each stage, the unique concerns these boys have because they are gifted are pointed out, as well as the special challenges they present to parents, counselors, and teachers. The next section, "Special Challenges for Gifted Boys," describes the impact of giftedness on boys' academic and social adjustment. The final section "Guiding Smart Boys," describes issues in parenting, teaching, mentoring, and guiding gifted boys and men. Specific suggestions are provided for parenting, teaching, and guiding gifted boys from pre-kindergarten through the college years. (ERIC abstract).

Silverman, L. (1999). The Construct of Asynchronous Development. *Peabody Journal of Education*, 72, 36-58

Explicates the construct of asynchronous development, advocating for its inclusion in planning for and educating gifted students. The paper examines the work of several researchers as it relates to asynchronous development of gifted students. It also discusses social and emotional aspects of vulnerability; socialization versus social development; emotional needs, development, and maturity; and identification, assessment, and education of asynchronous children. (ERIC abstract)

### Practice-based References

Adderholdt, M. & Goldberg, J. (1999). *Perfectionism: What's bad about being too good?* Revised and Updated Edition. Free Spirit Publishing.

Perfectionist tendencies seem to exist on a continuum, ranging from healthy to dysfunctional behavior. Gifted students, in particular, struggle with perfectionism. This book discusses how to strike a balance between three main areas of life: (1) work and school; (2) play and hobbies; and (3) family and social relationships. Geared towards adolescents, it explains why it is important to learn to give yourself a break, learn how to be pleased with who you are, and learn how to enjoy the healthy pursuit of excellence. The ten chapters deal with problems related to perfectionism and suggestions for dealing with the pressures face by perfectionists. Each chapter contains print and Web resources. (Each chapter contains print and Web site resources). (ERIC abstract).

Cline, S., & Schwartz, D. (1999). *Diverse populations of gifted children: Meeting their needs in the regular classroom and beyond*. Prentice Hall.

This book is designed to help classroom teachers identify and plan for gifted children from special populations. It examines ways in which teachers can help these students reach their potential. The first section of the book, "Background for Changing the Present Educational Paradigm," includes chapters that discuss reasons for the failure to integrate gifted education into the fabric of the school and the relationships between multiple intelligences philosophy and the curriculum. Section 2, "Twice Exceptional: Gifted Children with Disabilities," discusses the need to include gifted children with physical disabilities in the regular classroom, how to identify and support gifted children with sensory disabilities, challenges involved in educating children with learning disabilities, and gifted students who have attention deficit disorders. Section 3, "Special Populations of Gifted Children," includes discussions of gifted children from diverse backgrounds, exceptionally gifted children, young gifted children, and gifted females. Section 4, "Issues and Concerns: Addressing the Needs of Students with Exceptional Abilities in the Twenty-First Century," presents different views regarding the social and emotional development of the gifted and the need to change the focus of the educational paradigm from a deficit model to a strength model. (ERIC abstract).

Cooper, C. R. (1998). For the good of humankind: Matching the budding talent with a curriculum of conscience. *Gifted Child Quarterly*, 42, 238-244.

This article examined the types of curriculum that challenge gifted and talented students to make the world a better place. Along with the need for differentiation, the author contends that a curriculum needs to be highly moral and character building—a “curriculum of conscience.” Current events can act as stimuli such as the Oklahoma City bombing, the homeless, displacements from natural disasters and AIDS. Given that many gifted students are empathic, caring, and concerned about others’ welfare, they are interested in being involved in projects that help others.

Milne, H., & Reis, S. (2000). Using video therapy to address the social and emotional needs of gifted children. *Gifted Child Today*, 23, 24-29.

This article reviews the use of video therapy as a strategy to address social and emotional needs of gifted children and suggests sources and activities. A list of films is included that address behavior problems, disability, African American issues, social/emotional issues, gifted females, performing arts, and the process of talent development (ERIC abstract).

Peterson, J. S. (2003). An argument for proactive attention to affective concerns of gifted adolescents. *Journal of Secondary Gifted Education*, 14, 62-71.

To meet affective needs of gifted adolescents, teachers in gifted education can avail themselves of the expertise and resources of school counselors who, especially in recent decades, have been trained to create and implement prevention-oriented, developmental guidance programs. This article provides information about what counselors can offer to gifted adolescents and their teachers, including affective curricula, training in active listening, and co-facilitation of discussion groups. Other strategies for addressing social and emotional concerns in programs are also presented. (Abstract from journal)

Rimm, S. (2003). Underachievement. A national epidemic. In N. Colangelo & G Davis (Eds.). *Handbook of gifted education*. (3<sup>rd</sup> ed., pp.424-443). Pearson Educational Inc.

In this chapter, Rimm describes the six steps in her Trifocal Model that can help teachers and parents of underachieving gifted children reverse underachievement. She suggests how the home and school can collaborate to help the underachieving child to ensure effective interventions.

Speirs Neumeister, K. L. & Hébert, T. P. (2003). Underachievement versus Selective Achievement: Delving Deeper and Discovering the Difference. *Journal for the Education of the Gifted*, 26, 221-238.

This study examined, through a qualitative research design, the differences between underachievement and selective achievement in a gifted university student. Findings indicated that, while the participant demonstrated behaviors typically associated with underachievement, his healthy self-concept, self-regulation, and strong metacognitive abilities suggested a different image. Characteristics of nonproducers are discussed, and suggestions offered on ways to dialogue with a student to diagnose the reasons underlying the underachievement or selective achievement.

## Standard 6: Language and Communication

Educators of the gifted understand the role of language and communication in talent development and the ways in which exceptional conditions can hinder or facilitate such development. They use relevant strategies to teach oral and written communication skills to individuals with gifts and talents. Educators of the gifted are familiar with assistive technologies to support and enhance communication of individuals with exceptional needs. They match their communication methods to an individual's language proficiency and cultural and linguistic differences. Educators of the gifted use communication strategies and resources to facilitate understanding of subject matter for individuals with gifts and talents who are English language learners.

### GT6K1

**Forms and methods of communication essential to the education of individuals with gifts and talents, including those from diverse backgrounds.**

#### Research-based References

Daugherty, M., White, C. S., & Manning, B. H. (1994). Relationships among private speech and creativity measurements of young children. *Gifted Child Quarterly*, 38, 21-26.

The purpose of this study was to examine the relationships among thought processes represented in young children's private speech and creativity assessments. Forty-two preschool and kindergarten children were tested using the Torrance Thinking Creatively in Action and Movement. While the children worked on tangrams, observers collected a ten-minute sample of private speech for each child. There was a significant positive relationship between the TCAM, solving speech and coping/reinforcing speech. The authors conclude that private speech may be a viable tool for examining creative cognitive processes.

Myers, M. R., Slavin, M. J., & Southern, W. T. (1990). Emergence and maintenance of leadership among gifted students in group problem solving. *Roeper Review*, 12, 256-261.

This empirical study examined the relationship between leadership and task demands with unstructured and novel problems. It also examined the effectiveness of various leadership styles in group problem solving. The subjects were 122 secondary school students in grades 10 and 11 who participated in a weeklong summer program. These students were placed in groups of eight, which were directed by a trained teacher of the gifted. Data were collected using surveys, independent assessment of group projects, and qualitative observations. Results indicated that students who were fluent or "verbally aggressive" emerged as leaders. In groups where no strong leadership emerged early, "passive leaders" assumed leadership by taking personal responsibility for the completion and organization of the group task. Leaders tended to either attempt to lead the group through the force of their personality (i. e., Active Leaders) or through modeling group input to fit their ideas. Groups with Interpersonal Leaders tended to produce higher quality products than Authoritarian types of leadership.

Reilly, J. M., & Welch, D. B. (1994/1995). Mentoring gifted young women. *The Journal for Secondary Gifted Education*, 6, 120-128.

The Mentor Connection is a community-based learning experience for 11th and 12th grade girls enrolled in suburban high schools in the Minneapolis-St. Paul area. Students who participate complete an application and must show evidence of perseverance, ability, creativity, and have an identified area of study. This study reported the reactions of 162 former students to their mentoring experience. The participants reported these effects: the identification of a career; more confidence in their professional and personal abilities; an increase in ability to interact with other professionals; an understanding of the importance of networks; a relationship to their current career choice; and an overall enthusiasm for the high school experience.

#### Literature/Theory-based References

Feldhusen, J. F., & Kennedy, D. M. (1988). Preparing gifted youth for leadership roles in a rapidly

changing society. *Roeper Review*, 10, 226-230.

This article described five components of a leadership education: (a) experience in predicting, planning and extrapolating; (b) explicit leadership training; (c) thinking skills; (d) experience in problem finding and problem solving; and the (e) study of major concepts, themes, issues, and ideas. Along with leadership education, the authors emphasize the need for a comprehensive program that included a study of foreign languages; mentoring experiences with leaders; early mastery of knowledge in the major disciplines; experience in goal setting, formulating objectives, and planning; the examination of values, ethical principles and philosophical systems; and early identification of special talents.

Oakland, T., Falkenberg, B. A., & Oakland, C. (1996). Assessment of leadership in children, youth and adults. *Gifted Child Quarterly*, 40, 138-146.

The authors presented four concepts or theories that are presented in the literature: leadership as power and influence; leadership as skillful management of behavior; leadership as personal qualities and traits; leadership as an interaction between personal qualities and environmental resources and needs. They reviewed the psychometric properties of seven leadership measures. They concluded that significant deficiencies existed in the assessment of leadership among children and youth. Only the Leadership Skills Index (Karnes & Chauvin, 1985) was designed to measure leadership in children and youth. The authors recommend that those interested in identifying gifted children for programs take the best existing measures and supplement them by developing additional assessment procedures.

### **Practice-based References**

Choi, E. Y. (1998). Through another's eyes: Student fear number one. *Gifted Child Today*, 21(4), 30-31, 48.

Discusses the reluctance of gifted students to present their work orally and describes a school program that taught the principles of presentation to 10 of the least confident students in a public-speaking class. The program improved the confidence and speaking ability of most of the students.

Frey, C. P. (1998). Struggling with identity: Working with seventh-and eighth-grade gifted girls to air issues of concern. *Journal for the Education of the Gifted*, 21, 437-451.

This action research paper describes the materials and outcomes of a "women's issues" group with 7<sup>th</sup> and 8<sup>th</sup> grade gifted girls. The goals of the group were to maintain individual voices instead of conforming; to learn appropriate interactions with one another; to address the issues of perfectionism and self-esteem; to plan future career options; and to learn self-advocacy skills. The girls said that they were not embarrassed to be smart, they liked learning, liked thinking about abstract issues, and high academic goals.

Frey, C. P. (2000). A writer's workshop for highly verbal students. *Gifted Child Today*, 23(5), 38-43.

This article describes the development of a Writers' Workshop to meet the needs of six highly verbal gifted middle school students. The class met for one hour a week and encouraged students to talk about writing and writers. Students shared their own writing and engaged in literary criticism.

Meeker, M. (1995). Turning ugly ducklings into swans: How best to educate for cultural environmental differences. *Gifted Child Today*, 18(2), 30-39, 48.

This paper discusses methods for providing students from diverse home environments with essential educational experiences. It emphasizes the importance of patience in teaching children comprehension and offers guidelines for fostering children's development of comprehension, memory, and evaluative and relational thinking skills.

## Standard 6: Language and Communication

### GT6K2

#### Impact of diversity on communication.

#### Research-based References

Olszewski-Kubilius, P., & Laubscher, L. (1996). The impact of a college-counseling program on economically disadvantaged gifted students and their subsequent college adjustment. *Roeper Review*, 18, 202-208.

Fifty-five students from public high schools in a major urban school district were compared to a group of economically advantaged students who participated in a special summer program for high school students. Most of the students were Black or Hispanic (61%). The economically disadvantaged students changed their plans to finance college as a result of the summer program. The researchers found that in the pre-college phase, economically advantaged and disadvantaged gifted students differ only slightly in their aspirations, dreams, expectations and perceptions about college. However, once at college, the economically advantaged and disadvantaged groups become more polarized with respect to the perceptions and views they hold about college and each other. The economically disadvantaged were more likely to have been employed during their freshman year, perceived a declining level of support from teachers, and a lonely feeling on campus.

Plucker, J. A. (1998). Gender, race, and grade differences in gifted adolescents' coping strategies. *Journal for the Education of the Gifted*, 21, 423-436.

To determine differences in coping strategies among different demographic groups, Plucker examined 749 gifted and talented adolescent students who attended residential summer enrichment programs. The ethnic breakdown was 56.0% Caucasian, 20.5% African American, 10.5% Latino American, 9.7% Asian American, and 1.8% Native American. Coping strategies were assessed by using the Adolescent Coping Scale, a self-report instrument. Differences were found across race. African American and Hispanic students had the highest scores on Seeking Spiritual Support scale, Caucasians, on Self-Blame scale, and Hispanics on Worry scale.

Tyler-Wood, T., & Carri, L. (1993). Verbal measures of cognitive ability: The gifted low SES student's albatross. *Roeper Review*, 16, 102-105.

The Cognitive Abilities Test (CogAT), Otis-Lennon School Abilities Test, Stanford-Binet, Slosson Intelligence Test-Revised, and Matrix Analogies Test (MAT) were administered to 20 elementary students from lower socioeconomic backgrounds and 20 who were not from such backgrounds. The low SES students performed significantly lower than the control group on the verbal portion of the CogAT, the verbal portion of the Stanford-Binet, and the Slosson Intelligence Test-Revised.

Wills, J. S., Lintz, A., & Mehan, H. (2004). Ethnographic studies of multicultural education in US classrooms and schools. In J.A. Banks & C.A. M. Banks (Eds.), *Handbook of multicultural education* (2<sup>nd</sup> ed., pp. 163-183). San Francisco: Jossey-Bass.

The authors review qualitative research on the impact of multicultural education in U.S. classrooms, and summarize research on the discontinuity between language/culture of home and the school.

#### Literature/Theory-based References

Castellano, J. A. (2002). *Special populations in gifted education: Working with diverse gifted learners*. Boston, MA: Allyn & Bacon.

This book provides 13 readings on special populations in gifted education. It is based on the premise that gifted and talented students transcend (1) cultural, ethnic, and linguistic ties; (2) conditions that are disabling; (3) sexual orientation; (4) poverty; and (5) geography. Chapters relevant to the effect of culture, language, and disability on communication include: (1) "Casting a Wider Net: Linking Bilingual and Gifted Education" (Jim Granada); (2) "ESL Students in Gifted Education" (Nilda Aguirre); (11) "When the Gifts

Are Camouflaged by Disability: Identifying and Developing the Talent in Gifted Students with Disabilities" (Terry Neu).

Hettinger, H. R., & Knapp, N. F. (2001). Potential, performance, and paradox: A case study of J. P., a verbally gifted struggling reader. *Journal for the Education of the Gifted*, 24, 248-289.

In this case study, an 8-year-old, verbally gifted, struggling reader's difficult experiences at home and school are discussed, as well as the responses to the paradox of his being highly verbal yet failing at reading. Research findings on verbal giftedness and underachievement are presented.

Ingram, M. A. (2003). Sociocultural poetry to assist gifted students in developing empathy for the lived experiences of others. *Journal of Secondary Gifted Education*, 14(2), 83-90.

Sociocultural poetry can be used in conjunction with a 6-step counselor empathy model to help gifted students understand the lived experiences of others, as well as explore their own feelings and thoughts about self in relation to the world. The model can also be utilized to develop basic empathy skills.

Kitano, M. K., & Espinosa, R. (1995). Language diversity and giftedness: Working with gifted English language learners. *Journal for the Education of the Gifted*, 18, 234-254.

This article summarizes research on language diversity and giftedness, recommending these new strategies for identification: a developmental program that "evokes" a gifted student's potential; a broader conceptualization of intelligence; alternative constructs of giftedness; and assessment models developed for specific populations. In addition, English language learners tend to profit from primary language instruction during the early grades followed by a two-way bilingual program for upper level elementary gifted students. Recommended instructional strategies include student-centered approaches, emphasis on language development, valuing of students' languages in strong content courses, and collaborative learning. Family and community involvement must recognize cultural strengths and respect family resources.

Koloff, P. B. (1996). Gifted girls and the humanities. *The Journal for Secondary Gifted Education*, 7, 486-492.

The author suggests that bright students in English and history/social studies classes tend to encounter materials that are about males and a classroom environment that is more supportive of males. Gifted girls find that texts fail to "acknowledge the existence and contributions of women" (p. 487). She offers these suggestions for incorporating female points of view, voices, contributions, and lives into the content of the curriculum and ways to modify instructional approaches and classroom structure.

Kolesinski, M. T., & Leroux, J. A. (1992). The bilingual education experience, French-English, Spanish-English: From a perspective of gifted students. *Roepers Review*, 14, 221-224.

This article compares how French-English gifted students and Spanish-English gifted students are selected and educated in Ontario, Canada and Southern Texas. The primary difference is that the goal for French-English gifted students is developing French proficiency at the expense of relevant programming while for the Spanish-English gifted student, the goal is to develop English proficiency at the expense of the native language. Teachers need to be recruited who are fluent in two languages, are trained to use flexible teaching alternatives, and use differentiated curriculum within the framework of a respected culture.

Montgomery, D. (2003). *Gifted & talented children with special educational needs: Double exceptionality*. London, U.K.: David Fulton.

Based on international research and practice, this text is designed to enable elementary and secondary practitioners to identify able pupils with special needs such as attention deficit hyperactivity disorder, dyspraxia, dyslexia, and Down syndrome, and then make provisions for them within the mainstream school. Chapters relevant to the effect of disability on communication include (2) "The Gifted and Learning Disabled Student: Teaching Methodology that Works" (Wendy Stewart); (3) "Giftedness, Talent and Dyslexia" (Diane Montgomery); (6) "Gifted Children with Hearing Impairment" (Carrie Winstanley); (8) "Children with Asperger's Syndrome and Related Disorders" (Diane Montgomery).

## Practice-based References

Gavin, M. K. (1996). The development of math talent: Influences on students at a women's college. *The Journal of Secondary Gifted Education, 7*, 476-485.

This study focused on 16 female math majors who were in college at a highly selective liberal arts women's college. Using questionnaires, interviews with the students and mathematics faculty, participant observation in mathematics classrooms, and document reviews of college and departmental publications, the researchers found that young women needed teachers to tell them about their aptitude for math and encourage them to continue taking courses. In addition, the courses needed to have personal relevance for them with the professor allowing for class discussions and showing respect for the students.

Frey, C. P. (1998). Struggling with identity: Working with seventh-and eighth-grade gifted girls to air issues of concern. *Journal for the Education of the Gifted, 21*, 437-451.

This action research paper describes the materials and outcomes of a "women's issues" group with 7<sup>th</sup> and 8<sup>th</sup> grade gifted girls. The goals of the group were to maintain individual voices instead of conforming; to learn appropriate interactions with one another; to address the issues of perfectionism and self-esteem; to plan future career options; and to learn self-advocacy skills. The girls said that they were not embarrassed to be smart, they liked learning, liked thinking about abstract issues, and high academic goals.

Meeker, M. (1995). Turning ugly ducklings into swans: How best to educate for cultural environmental differences. *Gifted Child Today, 18*(2), 30-39, 48.

This paper discusses methods for providing students from diverse home environments with essential educational experiences. It emphasizes the importance of patience in teaching children comprehension and offers guidelines for fostering children's development of comprehension, memory, and evaluative and relational thinking skills.

Miller, A. K. (1997). Creating an international learning community. *Gifted Child Today, 20*(3), 15, 17.

Describes the international art education program in The Art Center of Waco, Texas. The benefits for gifted artists in learning about the art of other cultures and experimenting with different art forms are discussed, and the role parents play in developing an international learning community is highlighted.

Reyes, E. I., Fletcher, R., & Paez, D. (1996). Developing local multidimensional screening procedures for identifying giftedness among Mexican American border population. *Roeper Review, 18*, 208-211.

This article describes a project that successfully identified Mexican American students for the gifted program. The process included the training of local personnel in specific characteristics; parent, teacher, and community inventories in Spanish and English; student portfolios; the Torrance Test of Creative Thinking; and the Matrix Analogies Test. Using a holistic process, the ID teams selected students using local norms.

Willard-Holt, C. (1999). *Dual exceptionalities*. ERIC Digest E574. Reston, VA: Eric Clearinghouse on Disabilities and Gifted Education.

Gifted students with disabling conditions remain a major group of underserved and understimulated youth. This digest stresses the importance of both accommodating the disability appropriately while recognizing and nurturing the individual's intellectual strengths. Discussion of assessment is followed by a series of lists intended to assist parents and teachers in recognizing intellectual giftedness in the presence of a disability: gifted students with visual impairments, gifted students with physical disabilities, gifted students with hearing impairments, and gifted students with learning disabilities. Three additional lists are intended to help distinguish between gifted students who are bored and students who have an attention deficit hyperactivity disorder. The final section considers implications for students with dual exceptionalities in lists that address implications for identification, instruction, and classroom dynamics.

## Standard 6: Language and Communication

### GT6K3

#### Implications of culture, behavior, and language on the development of individuals with gifts and talents.

##### Research-based References

Fernández, A. T., Gay, L. R., Lucky, L. F., & Gavilan, M. R. (1998). Teacher perceptions of gifted Hispanic limited English proficient students. *Journal for the Education of the Gifted, 21*, 335-351.

This study examined the relationship between teachers' ethnicities and the way they rated characteristics for gifted Hispanic LEP students and any gifted student. Of 373 teachers who participated, 162 were Hispanic, 137 were White, and 74 were African American. Using the Survey on Characteristics of Gifted and Talented Hispanic Students (Marquez et al., 1992) and an adapted form that removed all of the characteristics that related specifically to Hispanic students, the researcher found similarities and differences in teacher perceptions. The authors conclude that teachers tend to perceive language abilities as important characteristics of giftedness that may have negative implications for gifted Hispanic LEP students.

Ford, D. Y., Grantham, T. C., & Harris, J. J. III. (1997). The recruitment and retention of minority teachers in gifted education. *Roepers Review, 19*, 213-220.

Presents data on the underrepresentation of black and other minority teachers and provides recommendations for the recruitment and retention of minority teachers in gifted education in the context of affective, philosophical, and cultural considerations. Research needs are identified in the areas of demographic data, career decisions, contributions of minority teachers to student achievement, and policies and practices.

Masten, W. G., & Plata, M. (2000). Acculturation and teacher ratings of Hispanic and Anglo-American students. *Roepers Review, 23*, 45-46.

This study examined possible differences between teacher ratings of Anglo-American and Hispanic students based on the student's acculturation level in the context of using behavior rating scales to identify students for gifted education programs. Findings indicated significant differences between teacher ratings of Anglo-American and Hispanic students based on the student's acculturation level.

##### Literature/Theory-based References

Ford, D. Y. (1998). The underrepresentation of minority students in gifted education: Problems and promises in recruitment and retention. *Journal of Special Education, 32*(1), 4-14.

Identifies factors that inhibit the recruitment and retention of minority students in gifted education programs including screening and identification issues (definitions and instrumentation); educational issues (quality of students' education); and personnel issues (lack of teacher training in gifted and urban education, low teacher referral).

Ford, D. Y., & Grantham, T. C. (2003). Parenting gifted culturally diverse children: Focus on education-related issues and needs. *Understanding our Gifted, 15*(4), 12-17.

After reviewing the needs of culturally diverse gifted students, the following recommendations are made: seek gifted programs that meet the dual needs of students who are gifted and diverse; encourage the hiring of culturally diverse teachers; expose children to diverse gifted mentors, and encourage school personnel to use multicultural materials.

Ford, D. Y., Tyson, C. A., Howard, T. C., & Harris, J. J. III. (2000). Multicultural literature and gifted Black students: Promoting self-understanding, awareness, and pride. *Roepers Review, 22*, 235-240.

This article focuses on recommended literature for gifted black and other minority students. The use of bibliotherapy with gifted students is described and recommendations are presented for using multicultural literature, along with guidelines for selecting high quality multicultural literature. An annotated bibliography of 10 recommended books is included.

Ingram, M. A. (2003). Sociocultural poetry to assist gifted students in developing empathy for the lived experiences of others. *Journal of Secondary Gifted Education, 14*(2), 83-90.

Sociocultural poetry can be used in conjunction with a 6-step counselor empathy model to help gifted students understand the lived experiences of others, as well as explore their own feelings and thoughts about self in relation to the world. The model can also be utilized to develop basic empathy skills.

Kolesinski, M. T., & Leroux, J. A. (1992). The bilingual education experience, French-English, Spanish-English: From a perspective of gifted students. *Roeper Review, 14*, 221-224.

This article compares how French-English gifted students and Spanish-English gifted students are selected and educated in Ontario, Canada and Southern Texas. The primary difference is that the goal for French-English gifted students is developing French proficiency at the expense of relevant programming while for the Spanish-English gifted student, the goal is to develop English proficiency at the expense of the native language. Teachers need to be recruited who are fluent in two languages, are trained to use flexible teaching alternatives, and use differentiated curriculum within the framework of a respected culture.

### **Practice-based References**

Miranda, E., & Landmann, R. (2001). Gifted teachers creating gifted classrooms: One exceptional teacher, one exceptional classroom. *Roeper Review, 4*, 230-234.

This article presents as a case study an exceptional third grade teacher who manages to challenge each child, from the child with a disability to the most gifted, to perform at a high level. The case study examines the classroom environment, the theme-based integrated curriculum, perceptions of participants, family learning, and school support.

Prichard, N. B. (2001). Mysteries, myths, and meaning. *Arts & Activities, 129*(4), 20-21.

Discusses an art project for students in grades 4 to 6 (but that could be adapted for older students) who attend the Old Donation Center for the Gifted and Talented in Virginia Beach, Virginia. Explains that the students created mixed-media boxes that interpreted and synthesized the folklore and arts of a culture.

Reyes, E. I., Fletcher, R., & Paez, D. (1996). Developing local multidimensional screening procedures for identifying giftedness among Mexican American border populations. *Roeper Review, 18*, 208-211.

This article describes a project that successfully identified Mexican American students for the gifted program. The process included the training of local personnel in specific characteristics; parent, teacher, and community inventories in Spanish and English; student portfolios; the Torrance Test of Creative Thinking; and the Matrix Analogies Test. Using a holistic process, the ID teams selected students using local norms.

## Standard 6: Language and Communication

### GT6S1

**Access resources and develop strategies to enhance communication skills for individuals with gifts and talents including those with advanced communication and/or English language learners.**

#### Research-based References

Castillo, L. C. (1998). The effect of analogy instruction on young children's metaphor comprehension. *Roeper Review*, 21, 27-31.

This study examined the relationship between analogy solution and metaphor comprehension by instructing young children in analogies. The subjects were 63 children aged 5.6 to 6.6 years. Children were randomly assigned to one of three conditions. Group 1 was given analogy instruction plus modeling. They were then asked to solve 10 new analogies and interpret 12 assessment metaphors. Group 2 was given analogies with no instruction and then asked to solve the new analogy problems and assessment metaphors. Control Group 3 looked through the analogy cards and then was asked to participate in the metaphor assessment. Results indicated that analogy training improved the young gifted children's metaphoric comprehension.

Kitano, M. K. & Pedersen, K. S. (2002). Action research and practical inquiry: Teaching gifted English learners. *Journal for the Education of the Gifted*, 26 (2), 132- 147.

Twelve teachers of the gifted who serve English learners participated in focus groups designed to glean practitioner knowledge concerning effective approaches. Participating teachers characterized gifted English learners as enthusiastic, high-level thinkers who have difficulty expressing their ideas in English. They recommended strategies consistent with identified needs and with the literature on best practice for the general population of English learners. Their examples show deft syntheses of challenge appropriate for gifted learners and research-based strategies for English learners.

Meador, K. S. (1994). The effect of synectics training on gifted and nongifted kindergarten students. *Journal for the Education of the Gifted*, 18, 55-73.

The purpose of this study was to determine the effect of synectics training on the development of creativity, self-concept, and verbal skills of gifted and nongifted kindergarten students. A sample of five groups of kindergarten students (N=107) in an urban south central United States district were pre and post tested using the Torrance Tests of Creativity, the Martinek Zaichkowsky Self-Concept Scale, and the Peabody Picture Vocabulary Tests. Identical synectics sessions were conducted in the gifted experimental and the nongifted experimental classrooms. These twenty minute sessions were held twice a week for 12 weeks. The author found qualitative differences between the gifted and nongifted groups in these characteristics: higher level of abstraction, ask more questions, greater range of understanding, larger vocabularies, more fluent, flexible, and original, and concludes that synectics training may be used in kindergarten to encourage creative growth.

VanTassel-Baska, J., Johnson, D. T., Hughes, C. E., & Boyce, L. N. (1996). A study of language arts curriculum effectiveness with gifted learners. *Journal for the Education of the Gifted*, 19, 461-480.

This study examined the effects of a 40-hour language arts curriculum unit on elementary students in grades four through six in selected school districts. The Integrated Curriculum Model incorporated these goals: "to develop literary analysis and interpretation skills, to develop persuasive writing skills, and to develop linguistic competency" (p. 464). The experimental groups improved significantly in all three dimensions of the performance-based assessments: writing, grammar, and syntactic forms and functions. The authors conclude that more targeted curriculum intervention that is aligned with specific assessments needs to occur in classrooms for gifted students. They also reported that the abstract concepts and ideas in the unit may be difficult for average learners at this grade level.

VanTassel-Baska, J., Zuo, L., Avery, L. D., & Little, C. A. (2002). Curriculum study of gifted-student

learning in the language arts. *Gifted Child Quarterly*, 46, 30-44.

This study was designed to measure the effects of a standards-based language arts curriculum with gifted learners at primary, intermediate, and middle school levels. The Integrated Curriculum Model (ICM) seeks to enhance learning through an approach to learning that integrates multiple aspects of language study, primarily literature and writing. The sample included 2,189 identified gifted learners in grades 2 through 8 representing 18 school districts in 10 states. Students were administered pre- and post-tests measuring literary analysis and writing skills. Students were assigned to experimental and comparison groups with the experimental group receiving the standards-based integrated curriculum. Data on treatment effects were gathered over a five-year period and suggested that the integrated units produced significant and important gains in both literature and writing based on performance-based assessments. The treatment was equally effective with economically disadvantaged as well as economically advantaged students.

### Literature/Theory-based References

Hébert, T. P. (1991). Meeting the affective needs of bright boys through bibliotherapy. *Roeper Review*, 13, 207-212.

The author uses case studies of gifted students to present six issues that face gifted boys: image management, self-inflicted pressure, being labeled "different," the need for male bonding, cultural expectations, and gender role conflict. He discusses the need for gifted boys to mask their identities to survive in a male culture; to be the best and always be strong; to "fit in," to bond with other boys his age, and to nurture traits considered non-masculine. The author provides a resource list of books that might be used with gifted boys in building positive self-concepts.

Kolloff, P. B. (1996). Gifted girls and the humanities. *The Journal for Secondary Gifted Education*, 7, 486-492.

The author suggests that bright students in English and history/social studies classes tend to encounter materials that are about males and a classroom environment that is more supportive of males. Gifted girls find that texts fail to "acknowledge the existence and contributions of women' (p. 487). She offers these suggestions for incorporating female points of view, voices, contributions, and lives into the content of the curriculum: (1) select literature that portray women who are strong, intelligent, and active; (2) use history texts or supplementary materials that include significant women's issues and roles; and (3) discuss issues that transcend gender such as social issues and reform. She also adds ways to modify instructional approaches and classroom structure: (1) provide equal opportunities for girls to enjoy teacher attention and respond to teacher questions; (2) assign bright girls to the same group; (3) include real-life and practical problems; (4) include hands-on learning; (5) use nonsexist language; and (6) provide adult female mentors.

Little, C. (2002). Reasoning as a key component of language arts curricula. *Journal of Secondary Gifted Education*, 13(2), 52-59

This article discusses application of Paul's (1992) elements of thought model in language arts curricula to provide students with the skills they need in order to analyze the world around them and manage the various types of issues and problems they encounter. Strategies for applying the model are described.

Marquez, J. A., & Sawyer, C. B. (1994). Curriculum Extension for the Gifted and Talented Student with Limited English Proficiency. In Malave, L. M. (Ed.), *National Association for Bilingual Education Annual Conference Journal*. Washington, DC.

This paper offers suggestions for meeting the special needs of gifted and talented (GT) students of limited English proficiency (LEP) through an extension of the differentiated curriculum. An overview of the differentiated curriculum is offered, and issues that must be addressed in meeting the needs of the GT/LEP student are discussed. Teaching strategies and methods that can be used in GT/LEP instruction, and recommended teacher characteristics, are also outlined. It is concluded that although no specific pre-packaged curriculum can be recommended to meet the needs of GT/LEP students, the criteria discussed here should be used in developing instructional strategies for this population. The curriculum, when extended using the criteria recommended here, is seen as providing the necessary foundation for both

### Practice-based References

Bermudez, A. B., Rakow, S. J., Marquez, J. M., Sawyer, C., & Ryan, C. (1993). Meeting the Needs of the Gifted and Talented Limited English Proficient Student: The UHCL Prototype. In Malave, L. M. (Ed.), *Annual Conference Journal. Proceedings of the National Association for Bilingual Education Conferences*, pp 115-133. Washington, DC.

A University of Houston-Clear Lake (UHCL), Texas, teacher education curriculum designed to train teachers in the identification, placement, and instruction of gifted and talented limited English proficient students (GT/LEPs) is discussed. A set of five 3-hour instructional modules and additional coursework developed for GT/LEP teacher training are described briefly. The course description, prerequisites, and objectives for four UHCL courses are appended. These include courses in teaching and parenting gifted children and young adults, curriculum development for the gifted, creativity and productivity, and counseling the gifted.

Bisland, A. (2003). Student-created public relations for gifted education. *Gifted Child Today*, 26(2), 60-65.

This article discusses the benefits of student participation in a gifted public relations campaign, including creating public support for gifted programming and developing leadership skills. Steps for developing a formal unit of instruction on public relations are described, along with ideas for public relations activities.

Choi, E. Y. (1998). Through another's eyes: Student fear number one. *Gifted Child Today*, 21(4), 30-31, 48.

Discusses the reluctance of gifted students to present their work orally and describes a school program that taught the principles of presentation to 10 of the least confident students in a public-speaking class. The program improved the confidence and speaking ability of most of the students.

Riley, T. L., & Brown, M. E. (1998). The magic of multimedia: Creating leaders of yesterday, today, and tomorrow. *Gifted Child Today*, 21(5), 20-22, 24-26.

Describes the rationale and layout of a "Magic of Multimedia" workshop, a program designed for gifted children (ages 9-12), and housed at Massey University, New Zealand. The multimedia workshop allows gifted children to use HyperStudio to investigate and communicate research findings in creative ways, and encourages social interaction.

Ring, L. M. (2000). The T in art is for thinking. *Gifted Child Today*, 23(3), 36-45, 53.

This article describes a unit on art appreciation and persuasive writing taught to 57 identified gifted fourth-grade students in a pullout program. The importance of teaching art appreciation to stimulate critical thinking is emphasized. The lesson process is provided, along with the hamburger model for persuasive writing.

Schack, G. D. (1988). Experts-in-a-book: Using how-to books to teach the methodologies of practicing professionals. *Roeper Review*, 10, 147-150.

This article identifies useful how-to books that contain information about the structure of the field, procedures for problem finding and focusing, specific methodological skills, suggestions for independent investigations and communication of results. Using these books, students may conduct independent studies using the methods of practicing professionals in a variety of fields.

## Standard 6: Language and Communication

### GT6S2

**Use advanced oral and written communication tools, including assistive technologies, to enhance the learning experiences of individuals with exceptional learning needs.**

#### Research-based References

Castillo, L. C. (1998). The effect of analogy instruction on young children's metaphor comprehension. *Roeper Review*, 21, 27-31.

This study examined the relationship between analogy solution and metaphor comprehension by instructing young children in analogies. The subjects were 63 children aged 5.6 to 6.6 years. Children were randomly assigned to one of three conditions. Group 1 was given analogy instruction plus modeling. They were then asked to solve 10 new analogies and interpret 12 assessment metaphors. Group 2 was given analogies with no instruction and then asked to solve the new analogy problems and assessment metaphors. Control Group 3 looked through the analogy cards and then was asked to participate in the metaphor assessment. Results indicated that analogy training improved the young gifted children's metaphoric comprehension.

Karnes, F. A., Meriweather, S., & D'Ilio, V. (1987). The effectiveness of the leadership studies program. *Roeper Review*, 9, 238-241.

During 1985-1986, over 100 sixth through eleventh grade students participated in the summer Leadership Studies Program at the University of Southern Mississippi. The major purpose of the program was to teach students the skills necessary for growth in leadership development. Students participated in these activities: fundamentals of leadership, decision-making skills, group-dynamic skills, personal skills, and planning skills. To determine growth, the instructors in the program administered A Leadership Skills Inventory (Karnes & Chauvin, 1984) at the beginning and end of the summer program. They found that the students performed significantly better on all of the subscales: fundamentals of leadership, written communication skills, speech communication skills, values clarification, decision making skills, group dynamics skills, problem solving skills, personal development skills and planning skills.

VanTassel-Baska, J., Johnson, D. T., Hughes, C. E., & Boyce, L. N. (1996). A study of language arts curriculum effectiveness with gifted learners. *Journal for the Education of the Gifted*, 19, 461-480.

This study examined the effects of a 40-hour language arts curriculum unit on elementary students in grades four through six in selected school districts. The Integrated Curriculum Model incorporated these goals: "to develop literary analysis and interpretation skills, to develop persuasive writing skills, and to develop linguistic competency" (p. 464). The experimental groups improved significantly in all three dimensions of the performance-based assessments: writing, grammar, and syntactic forms and functions. The authors conclude that more targeted curriculum intervention that is aligned with specific assessments needs to occur in classrooms for gifted students. They also reported that the abstract concepts and ideas in the unit may be difficult for average learners at this grade level.

VanTassel-Baska, J., Zuo, L., Avery, L. D., & Little, C. A. (2002). Curriculum study of gifted-student learning in the language arts. *Gifted Child Quarterly*, 46, 30-44.

This study was designed to measure the effects of a standards-based language arts curriculum with gifted learners at primary, intermediate, and middle school levels. The Integrated Curriculum Model (ICM) seeks to enhance learning through an approach to learning that integrates multiple aspects of language study, primarily literature and writing. The sample included 2,189 identified gifted learners in grades 2 through 8 representing 18 school districts in 10 states. Students were administered pre- and post-tests measuring literary analysis and writing skills. Students were assigned to experimental and comparison groups with the experimental group receiving the standards-based integrated curriculum. Data on treatment effects were gathered over a five-year period and suggested that the integrated units produced significant and important gains in both literature and writing based on performance-based assessments. The treatment was equally effective with economically disadvantaged as well as economically advantaged students.

### Literature/Theory-based References

Smutney, J. F. (2001). *Creative strategies for teaching language arts to gifted students (K-8)*. ERIC Digest E612. Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education.

This digest paper presents strategies and activities that can be used to encourage gifted students to develop their individual talents in the language arts. Suggestions for exploring poetic language especially free verse, include ideas for creating group poems and catalysts for creating individual poems. Suggestions for exploring the elements of fiction include encouraging divergent thinking about stories and using fairy tales with slightly altered characters to explore fiction. Suggestions for the study of biography and historical fiction address helping students research the facts and trying to describe an event from the perspective of various real or imaginary individuals. These types of activities are thought to develop creative writing, composing, and dramatizing skills as well as the higher level thinking skills of analysis, interpretation, and evaluation.

Troxclair, D. A. (2000). Differentiating instruction for gifted students in regular education social studies classes. *Roeper Review*, 22, 195-198.

The author describes ways that social studies teachers differentiate instruction for gifted students: curriculum compacting, conceptual thematic units, questioning strategies and interest development centers, and independent study and mentorships. The author provides a figure of webbing major concepts from art, language arts, affective, business, religion, music and history around the theme of "symbols."

VanTassel-Baska, J. (2003). *Differentiating the language arts for high ability learners, K-8*. ERIC digest. U.S.; Virginia: ERIC Clearinghouse on Disabilities and Gifted Education. March 25, 2005, from ERIC database.

This digest discusses the need for differentiating language arts instruction for gifted students in grades K-8. It begins by describing differentiation approaches, including acceleration, depth, complexity, challenges, and creativity. It then explains how teachers can differentiate the language arts curriculum in the following five areas: (1) literature, including providing many experiences for students to read quality texts and emphasizing critical reading; (2) writing, including empathizing the development of skills in expository and persuasive writing; (3) language skills, including emphasizing the understanding of word relationships and origins, and the development of an appreciation for semantics, linguistics, and the history of language; (4) oral communication, including developing skills in evaluative listening, debate, and discussion; and (5) foreign language, including promoting early foreign language study and acceleration of language study. The final part of the digest explores individual differences among verbally talented students and presents two vignettes to portray the differences that exist in gifted learners who are the same age and exhibit aptitude in verbal areas. It is concluded that educators responsible for planning language art programs for high ability learners need to consider multiple variables in the areas of differentiation approach, content, and individual differences among gifted learners.

VanTassel-Baska, J., Johnson, D. T., & Boyce, L. N. (Eds.) (1996). *Developing verbal talent: Ideas and strategies for teachers of elementary and middle school students*. Boston, MA: Allyn & Bacon.

This book provides ideas and strategies for developing verbal talents in elementary and middle school students. Relevant chapters include: (3) "Reading, Writing, and the Construction of Meaning" (Nancy Nelson Spivey); (4) "Mentors on Paper: How Classics Develop Verbal Ability" (Michael Clay Thompson); (7) "Oral Communication: Thinking in Action" (Ann L. Chaney); (8) "Teaching Discourse through Writing" (Colleen Kennedy); (9) "Formal Language Study for Gifted Students" (Michael Clay Thompson); (11) "Creating a New Language Arts Curriculum for High-Ability Learners" (Joyce VanTassel-Baska); (12) "Evaluating Language Arts Materials" (Phyllis W. Aldrich); (14) "In the Big Inning Was the Word: Word Play Resources for Developing Verbal Talent" (Linda Neal Boyce); (17) "Enhancing Oral Communication for Intermediate Students" (Sandra Coleman and Chwee Geok Quek).

### Practice-based References

Choi, E. Y. (1998). Through another's eyes: Student fear number one. *Gifted Child Today*, 21(4), 30-31,

48.

Discusses the reluctance of gifted students to present their work orally and describes a school program that taught the principles of presentation to 10 of the least confident students in a public-speaking class. The program improved the confidence and speaking ability of most of the students.

Frey, C. P. (2000). A writer's workshop for highly verbal students. *Gifted Child Today*, 23(5), 38-43.

This article describes the development of a Writers' Workshop to meet the needs of six highly verbal gifted middle school students. The class met for one hour a week and encouraged students to talk about writing and writers. Students shared their own writing and engaged in literary criticism.

Hensel, N. H. (1991). Social leadership skills in young children. *Roeper Review*, 14, 4-6.

To determine how schools might provide opportunities for children to develop social sensitivity, the authors studied four and five year old gifted preschool and kindergarten children. After introducing a series of role-playing and problem solving activities that attempted to sensitize the children to others' perspectives, the children's behavior was observed on the playground in classroom activities. The authors also administered the Peabody Picture Vocabulary Test (PPVT) and a sociogram (Perez et al., 1982). Children who scored high on the PPVT also scored high on the sociogram providing validation for the influence of verbal skills on peers. These children also exhibited more leadership characteristics in their dramatic play. They recommend some strategies that teachers may use in developing leadership and prosocial characteristics in children: focusing on different viewpoints; modeling caring behaviors; discussing alternative ways of handling problems; helping children learn to make decisions; helping children develop interactive skills; and helping children learn to talk about their feelings and ideas.

Riley, T. L., & Brown, M. E. (1998). The magic of multimedia: Creating leaders of yesterday, today, and tomorrow. *Gifted Child Today*, 21(5), 20-22, 24-26.

Describes the rationale and layout of a "Magic of Multimedia" workshop, a program designed for gifted children (ages 9-12), and housed at Massey University, New Zealand. The multimedia workshop allows gifted children to use HyperStudio to investigate and communicate research findings in creative ways, and encourages social interaction.

Ring, L. M. (2000). The T in art is for thinking. *Gifted Child Today*, 23(3), 36-45, 53.

This article describes a unit on art appreciation and persuasive writing taught to 57 identified gifted fourth-grade students in a pullout program. The importance of teaching art appreciation to stimulate critical thinking is emphasized. The lesson process is provided, along with the hamburger model for persuasive writing.

## Standard 7: Instructional Planning

Curriculum and instructional planning is at the center of gifted education practice. Educators of the gifted develop long-range plans anchored in both general and special curricula. They systematically translate shorter-range goals and objectives that take into consideration an individual's abilities and needs, the learning environment, and cultural and linguistic factors. Understanding of these factors, as well as the implications of being gifted and talented, guides the gifted educator's selection, adaptation, and creation of materials, and use of differentiated instructional strategies. Learning plans are modified based on ongoing assessment of the individual's progress. Moreover, educators of the gifted facilitate these actions in a collaborative context that includes individuals with gifts and talents, families, professional colleagues, and personnel from other agencies as appropriate. Educators of the gifted are comfortable using appropriate technologies to support instructional planning and individualized instruction.

### GT7K1

#### Theories and research models that form the basis of curriculum development and instructional practice for individuals with gifts and talents.

##### Research-based References

Moon, S. M., Feldhusen, J. F., & Dillon, D. R. (1994). Long-term effect of an enrichment program based on the Purdue Three-Stage Model. *Gifted Child Quarterly*, 38, 38-48.

Based on student and parent questionnaires and school data, the Purdue Three-Stage Model of enrichment was examined. Students preferred to work on personally generated studies based on their areas of interest instead of teacher assigned ones. The three stages of the model include a focus on divergent and convergent thinking, development in creative problem solving, and an application of research skills and independent study skills.

Renzulli, J. S. & Reis, S. M. (2003). The schoolwide enrichment model: Developing creative and productive giftedness. In N. Colangelo & G.A. Davis (Eds.) *Handbook of gifted education (3<sup>rd</sup> ed., pp.184-203)*. Boston: Allyn & Bacon.

This chapter outlines the research evidence and "how-to" applications of the Schoolwide Enrichment Model, including how students may explore and research areas of interest after compacting out of content already known. Research-based evidence using Type I, II, and III investigations is documented within the chapter citing achievement gains, life production, and positive student attitudes toward self and school.

Sternberg, R. J., Torff, B., & Grigorenko, E. L. (1998). Teaching triarchically improves school achievement. *Journal of Educational Psychology*, 90, 374-384.

Sternberg's Triarchic Model involves three components: analytical thinking, practical thinking, and creative thinking. Using an identification tool, the Sternberg Triarchic Abilities Test, with instructional processes in elementary and middle school suggest that student achievement gains are slightly higher when using the Triarchic Model than with other critical thinking approaches.

Swiatek, M. A. (2000). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roepers Review*, 24, 141-144.

Using the Stanley Model of Talent Identification and Development a high-ceiling testing instrument is administered to determine student placement and a diagnostic-prescriptive approach is taken to plan for the student's accelerated classes in core academic areas, as appropriate. Over 33 years of research has been collected, suggesting that the approach produces significant achievement gains.

VanTassel-Baska, J., Avery, L. D., Little, C. A., & Hughes, C. E. (2000). An evaluation of the William and Mary units on schools. *Journal for the Education of the Gifted*, 23, 244-272.

The Integrated Curriculum Model includes the combination of advanced content, intra and interdisciplinary concepts, and products and processes conducive to higher-level thinking. Using the model, strong longitudinal evidence of student achievement gains in science and language arts are noted.

VanTassel-Baska, J., & Brown, E. (2005). An analysis of gifted education curricular models. In F. Karnes & S. Bean (Eds.), *Methods and materials for teaching the gifted* (pp. 75-106). Waco, TX: Prufrock Press.

This chapter outlines an analysis study of curriculum model comparisons including the Integrated Curriculum Model, the Schoolwide Enrichment Model, Schlichter Model for Talents Unlimited, Sternberg's Triarchic Model, Gardner's Multiple Intelligence Model, Betts' Autonomous Learner Model, The Kaplan Grid, the Purdue Three-Stage Enrichment Model, and others. Comparisons regarding the research base, curriculum, teacher training, ease of implementation, and student effectiveness data are listed.

### **Literature/Theory-based References**

Betts, G. T., & Neihart, M. (1986). Implementing self-directed learning models for the gifted and talented. *Gifted Child Quarterly*, 30, 174-177.

The Autonomous Learner Model suggests that as gifted student needs are met they will become autonomous learners. The model is divided into five dimensions: orientation, individual development, enrichment activities, seminars, and in-depth study. Suggestions for scope and sequence development and independent study programs are emphasized.

Gagné, F. (1995). From giftedness to talent: A developmental model and its impact on the language of the field. *Roeper Review*, 18, 103-111.

Gagné's Differentiated Model of Giftedness and Talent illustrates the impact of environmental catalysts such as family, community, life events, and interests as well as natural catalysts such as student precocity and intelligence that impact life achievement, suggesting importance on providing community and family resources in a talent domain for precocious students.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21<sup>st</sup> century*. New York: Basic Books.

In this book, Gardner describes how the theory of multiple intelligences has evolved and been revised. He introduces the possibility of 3 new intelligences, and argues that the concept of intelligence should be broadened. In addition, he offers practical guidance on the educational uses of the theory in schools and museums, and responds to the critiques leveled against it. Gardner also puts forth his ideas about the multiple forms of creativity, leadership, and moral excellence and speculates about the relationship between multiple intelligences and the world of work in the future. (PsycINFO Database Record (c) 2004 APA, all rights reserved).

Kaplan, S. (2005). Layering differentiated curricula for the gifted and talented. In F. Karnes & S. Bean (Eds.) *Methods and materials for teaching the gifted* (pp. 107-132). Waco, TX: Prufrock Press.

Kaplan's Grid uses the process, content, product relationship to define differentiation and to use as a developmental framework for curriculum planning. Using a layered approach, Kaplan describes how to differentiate the core curriculum.

Tomlinson, C. A., Kaplan, S. N., Renzulli, J., Burns, D. E., Leppien, J. H., & Purcell, J. H. (2001). *The Parallel curriculum: A model for planning curriculum for gifted students and whole classrooms*. Thousand Oaks, CA: Corwin Press.

The four parallel approaches to curriculum development illustrate ascending intellectual demand as a means of extending the intensity of challenge for students as they work toward expertise in learning. The book provides practical guidelines for developing curriculum that ensure rich curriculum for all learners. The basis of the model incorporates four dimensions that can be used singly or in combination: the core curriculum, the curriculum of connections, the curriculum of practice, and the curriculum of identity. The core curriculum is meant to be a basis for all other dimensions.

### Practice-based References

Anderson, L. W., & Krathwohl, (Eds). (2001). *A Taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman.

Based on Bloom's Taxonomy, the authors introduce creative production as the highest level of Bloom's and provide a rationale and examples of questions and activities for teachers to scaffold learning processes to promote higher-level tasks.

Elder, L., & Paul, R. (2003). *Analytic thinking: How to take thinking apart and what to look for when you do*. Dillon Beach, CA: The Foundation for Critical Thinking.

This booklet provides open-ended question stems based on logic across disciplines. Rubrics to analyze thinking are also provided based on the scaffolding of reasoning through events or situations by determining the central purpose or question at issues, gathering information or data, examining inferences and interpretations based on data, understanding assumptions of others and self, and recognizing other points of view and the implications and consequences of actions.

Schlichter, C. L., & Palmer, W. R. (Eds.). (1993). *Thinking smart: A premiere of the Talents Unlimited model*. Mansfield Center, CT: Creative Learning Press.

Talents Unlimited consists of four major components to help students advance including specific skill or talent abilities that incorporate productive thinking, communication, forecasting, decision-making and planning; model instructional strategies; inservice training for teachers; and an evaluation system for assessing students' thinking skills. Evidence suggests that the program enhances students' creative and critical thinking and standardized test scores.

Tomlinson, C. A. & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades 5-9*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A., & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades K-5*. Alexandria, VA: Association for Supervision and Curriculum Development.

Both of these books outline how to differentiate instruction for specific grade levels, as indicated using tiered lessons as a basis for instruction and grouping students based on interest, readiness, and/or learning profiles. Each book offers practical examples and lesson plans in each of the core content and grade span area as a resource for teachers to model lessons in their own classrooms using differentiation as a guide.

## Standard 7: Instructional Planning

### GT7K2

**Features that distinguish differentiated curriculum from general curricula for individuals with exceptional learning needs.**

### Research-based References

Johnson, D. T., Boyce, L. N., & VanTassel-Baska, J. (1995). Science curriculum review: evaluating materials for high-ability learners. *Gifted Child Quarterly*, 39, 36-45.

This article describes the findings of a review of existing K-8 science curriculum materials that was carried out under the National Science Curriculum Project for High-Ability Learners. Twenty-seven sets of materials were reviewed using criteria developed and refined by project staff. The purpose of the review was to ascertain whether currently available materials met the new standards in the teaching of science and the needs of gifted learners. The review findings suggest that existing basal textbooks fail to meet

new science curriculum standards for all students, but particularly for high-ability learners. Modular programs and supplementary materials were found to be superior to basal textbooks on most dimensions.

VanTassel-Baska, J., Avery, L. D., Little, C., & Hughes, C. (2000). An evaluation of the implementation of curriculum innovation: The impact of the William and Mary units on schools. *Journal for the Education of the Gifted*, 23, 244-272.

Based on focus groups, interviews, documents, and classroom observations of schools implementing the William and Mary language arts and science curricula it was found that students, teachers, parents, and administrators observed increased student engagement in class, enhanced reasoning skills, and the improvement of habits of mind.

### Literature/Theory-based References

Purcell, J. H., Burns, D. E., Tomlinson, C. A., Imbeau, M. B., & Martin, J. L. (2002). Bridging the gap: A tool and technique to analyze and evaluate gifted education curricular units. *Gifted Child Quarterly*, 46, 306-338.

Research on the quality of educational standards, our knowledge about the quality of textbooks, and the performance of high-achieving students on international assessments all point to the need for exemplary curricula for gifted and talented young people. The gap between research in these areas and the needs of gifted and talented learners is startlingly clear. This article includes information about the development of a rubric that was originally designed to assess the quality of curricular units that are submitted annually to the National Association for Gifted Children (NAGC) Curriculum Division's Curriculum Competition. The article also includes information about 4 different, but related, uses for the rubric.

Tomlinson, C. A. (2001). Differentiated instruction in the regular classroom: What does it mean? How does it look? *Understanding Our Gifted*, 14(1), 3-6 SL.

This article outlines what differentiated instruction should look like in the regular classroom for all students and how that is differentiated for the gifted learner based on a content, process, product orientation to curriculum differentiation based on learner interests, ability, and learning preferences.

Tomlinson, C. A. (2002). Different learners, different lessons. *Instructor*, 112(2), 21, 24-26 SLW.

This article describes how teachers can modify lessons that meet the varied learner needs based on interest, readiness, and/or learning profiles of students. Considerations and accommodations should be made for all ability levels as well as individual learning interest and styles.

VanTassel-Baska, J., & Stambaugh, T. (2006). Curriculum development processes. In *Comprehensive curriculum for gifted learners (3<sup>rd</sup>)*. Boston, MA: Allyn & Bacon.

This chapter outlines specific assumptions regarding curriculum development and provides examples for educators and leaders to modify or write curriculum specific to gifted learners. A process of planning, needs assessment, curriculum development teams, curriculum development approaches, field testing, implementation, evaluation, and revisions is explained as part of the overall process. In addition, curriculum goals and outcomes specific to gifted learners are suggested.

### Practice-based References

Avery, L. D., & Zuo, L. (2003). Selecting resources and materials for high-ability learners. In J. VanTassel-Baska & C. A. Little (Eds.). *Content-based curriculum for high ability learners* (pp.259-278). Waco, TX: Prufrock Press.

This chapter provides specific selection criteria for determining resources for gifted students and also lists suggested curriculum or supplemental resources in each content area that could be utilized by educators working with gifted learners.

Riley, T. R. (2005). Teaching on a shoestring: Materials for teaching gifted and talented students. In F. Karnes & S. Bean (Eds.) *Methods and materials for teaching the gifted*. (2<sup>nd</sup> ed., pp. 657-700). Waco, TX: Prufrock Press.

This chapter outlines why differentiation is important and provides educators with how to decide on materials that are differentiated for gifted learners, including for selection, how to search for materials, how to find free and inexpensive materials, and a list of teacher resources, publishing companies, and websites that will assist them with differentiation.

Johnson, S. K; Haensly, P. A., Ryser, G. R., & Ford, R. F. (2002). Changing general education classroom practices to adapt for gifted students. *Gifted Child Quarterly, 46*, 45-63.

Examined changes in elementary school general classroom practices to meet the needs of gifted and talented students and identified factors that influenced those changes. The study was part of the Mustard Seen project (funded by the Jacob K. Javits Gifted and Talented Education Act) to train teachers to differentiate curricula for gifted students in the general education classroom. Changes were measured using the Classroom Instructional Practices Scale. The sample included 1 urban and 5 rural school sites, 8 principals, 74 teachers, 17 mentor teachers, and 18 community representatives. Throughout the 2 years of implementation, the majority of teachers at each site made changes. Changes in classroom practices and influencing factors were determined from interviews, field notes, formal and informal observations, and a final survey. Results show that Ss cited staff-development activities, leadership, mentoring, resources, and project support as extremely beneficial. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

Tomlinson, C. A., & Reis, S. (Ed). (2004). *Differentiation for gifted and talented students*. Thousand Oaks, CA: Corwin Press, Inc.

Drawing many comparisons and contrasts between gifted and general education best practices, the articles in this volume highlight the many benefits of flexible instruction and curriculum, discuss impediments to the successful adoption of differentiation in classrooms and school districts, and show how educators can overcome these obstacles collaboratively. Key features of this book include: commentary by a national leader in differentiation strategies; a view of differentiation through multiple lenses, and the actual and potential benefits gifted and general education derive from its implementation; and eleven articles from leading researchers and educators in the field of differentiation. Within this reference guide, readers will also find explicit models, general curriculum guidelines, and other tools and methods. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

## **Standard 7: Instructional Planning**

### **GT7K3**

**Curriculum emphases for learners with gifts and talents within cognitive, affective, aesthetic, social, and linguistic domains.**

#### **Research-based References**

Byers, J. A., Whitsell, S. S., & Moon, S. M. (2004). Gifted students' perceptions of the academic and social/emotional effects of homogeneous and heterogeneous grouping. *Gifted Child Quarterly, 48*, 7-23.

This study investigated student perceptions of differences in academic and social effects that occur when gifted and talented youth are grouped homogeneously as contrasted with heterogeneously. Forty-four students in grades 5-11 completed interviews or questionnaires while attending a summer residential program for gifted and talented students. Questions were designed to clarify the nature of academic and social outcomes under the two grouping conditions. On the whole, the participants perceived homogenous grouping more positively with respect to academic outcomes. They learned more in the more challenging environment provided by homogeneous classes. However, they had mixed feelings about which setting better met their social needs. Participants seemed to value having both similar peers in homogenous classes and the social diversity of heterogeneous classes. Implications of the findings for educators and counselors of gifted students are discussed.

Clark, G., & Zimmerman, E. (1997). *Project ARTS: Programs for ethnically diverse, economically disadvantaged, high ability, visual arts students in rural communities: Identification, curriculum,*

evaluation. ED 419765.

This publication reports findings related to "Project ARTS: Arts for Rural Teachers and Students," a collaborative program among Indiana University, New Mexico State University, and Converse College in South Carolina. Seven rural elementary schools in those three states were also selected to participate. This report provides an overview of the project and findings relative to the identification, curriculum development, and assessment and evaluation phases of the project. The present findings contribute to a better understanding of how to identify, and provide appropriate educational services to underrepresented and undeserved artistically talented students in rural schools and help achieve equal access in selecting students from all walks of life for visual arts programs for students with high abilities.(ERIC abstract).

Rostan, S. M., Pariser, D., & Gruber, H. E. (2002). A cross-cultural study of the development of artistic talent, creativity and giftedness. *High Ability Studies*, 13, 125-155.

In this study, examining the relationships among age, culture, training in the fine arts, the technical and aesthetic properties of drawings, and realized artistic giftedness, the researchers intermixed the juvenile drawings executed by critically acclaimed artists with artworks executed by contemporary North American and Chinese North American children. When judges from the two cultures, blind to this mix, assessed the drawings, assessments made by the representatives of both cultures were more alike than they were different. Only the North American judges' assessments, however, suggest that the art students' life drawings were more technically and aesthetically successful, and more creative, on the average, than the non-art students' drawings. Conclusions and implications stress the role of technical skill in the development of artistic potential. (PsycINFO Database Record (c) 2004 APA, all rights reserved

Zimmerman, E. (1995). Factors influencing the art education of artistically talented girls. *Journal of Secondary Gifted Education*, 6, 103-112.

Interviews with 19 adolescents attending the Indiana University Summer Arts Institute examined their perceptions concerning their early art talent, adult and peer encouragement, positions in their families, future expectations, interest in creating art, living environments, familiarity with artists, schooling, and art abilities. Gender similarities and differences are analyzed. (Author abstract).

### Literature/Theory-based References

Cross, T. L., & Coleman, L.J. (2000). *Being gifted in school*. Waco, TX: Prufrock Press.

This is a very comprehensive book about research, theory and practices in gifted education.. Chapters cover theories of giftedness, identification, the gifted child's families, counseling issues, curriculum, instructional theory, teaching methods, etc. The authors give not just the research about each issue or practice they present, but the assumptions underlying them (taken from <http://www.ctd.northwestern.edu/resources/bibliography/identification.html>).

Nugent, S. A. (2005). Affective education: Addressing the social and emotional needs of gifted students in the classroom. In F. Karnes & S. Bean (Eds.) *Methods and materials for teaching the gifted* (2<sup>nd</sup> ed., pp. 409-438) Waco, TX: Prufrock Press.

This chapter defines what affective education is and provides a rationale for using affective education in the curriculum for gifted learners. Specific ideas for including the affective domain in the regular curriculum are addressed including bibliotherapy, service learning, cinematherapy, incorporation of the arts, a nurturing classroom climate, character education, and metacognition. Resources are included in the appendix.

Parker, J. P., & Begnaud, L. G. (2003). *Developing creative leadership*. Gifted Treasury Series. Teacher Ideas Press.

Part of the Gifted Treasury Series, *Developing Creative Leadership* provides an overview of leadership in the crucial grades of 6-12. Drawing upon theories based on cognitive and affective leadership, and the role of leadership in gifted education, leadership is discussed as it pertains to research projects, problem solving, interpersonal communication, and decision-making. Strategies are provided for curriculum planning in the first half of the book in preparation for the second half, which presents practical units for

developing leadership. Suggestions are made for developing programs around the Leadership Training Model (LTM), a comprehensive model on which gifted programs can be based.

Winner, E., & Martino, G. (2003). Artistic giftedness. In N. Colangelo & G.A. Davis (Eds.) *Handbook of gifted education*, (3<sup>rd</sup> ed. pp. 335-349). Boston, MA: Allyn & Bacon.

This chapter outlines the characteristics of gifted students in the arts and provides a connection between the childhood gifts and adult creativity in the arts.

Zimmerman, E. (1998). Nurturing the arts in programs for gifted and talented students. *Phi Delta Kappan*, 79, 746-751.

All programs for the gifted and talented should incorporate visual and performing arts, so that students' natural interests and creative abilities are not stifled. Many gifted and talented high school students not classified as artistically talented can achieve in discipline-based curriculum areas stressing nondiscursive art-making activities. General educators and gifted and talented specialists should collaborate. (ERIC abstract).

### Practice-based References

Halstead, J. (2002). *Some of my best friends are book (2nd ed)*. Dayton, OH: Ohio Psychology Press.

This book outlines the importance of bibliotherapy for gifted students and suggests books appropriate for gifted learners based on their social-emotional/affective needs, characteristics, cognitive abilities, and interests. A reading list for varied grade levels is included.

Johnson, K. (2001). Integrating an affective component in the curriculum for gifted and talented students. *Gifted Child Today*, 24(4), 14-15.

Gifted students and their affective needs are outlined in this article, including a rationale for why affective needs should be met in the regular curriculum. The article concludes with ideas for service learning projects, in particular, that channel the affect and cognitive needs of gifted students into productive learning options.

## Standard 7: Instructional Planning

### GT7S1

**Align differentiated instructional plans with local, state/provincial, and national curricular standards.**

### Literature/Theory-based References

Baker, E.L., & Schacter, J. (1996). Expert benchmarks for student academic performance: The case for gifted children. *Gifted Child Quarterly*, 40, 61-65.

This article describes two major strategies for developing standards to assess complex student performances: discussion, analysis, and agreement of teachers and other curriculum experts about criteria and the examination of what experts do. The authors suggest that based on the two major strategies, standards might be developed one or two grades ahead of the grade being assessed.

Renzulli, J. S. (2001). Standards and standards plus: A good idea or a new cage? *The Journal of Secondary Gifted Education*, 7, 139-140.

Renzulli suggests that developers of standards need to be guided by the following considerations in order to meet the needs of gifted students and not hold students back: 1) Standards must be benchmarked so that a continuum from minimal to advanced levels of accomplishment is apparent; 2) Developers need to "take into account who should be responsible for determining what should be taught and long term consequences" (p. 140); 3) Pedagogy should be left up to the teacher; and 4) Developers must consider

the implications that standards will have on assessment and accountability.

VanTassel-Baska, J. (1997). Excellence as a standard for all education. *Roeper Review*, 20, 9-12.

Several strategies can be used to promote educational excellence. These include establishing supportive mission statements, building appropriate curriculum resources and materials, individualizing instruction to optimize student learning and providing leadership models. These strategies can also be supplemented through parent and community involvement. This article defines the difference between equity and excellence and how differentiation of curriculum should include high standards for all students but will look different for different ability levels.

VanTassel-Baska, J. (2002). *Curriculum planning and instructional design for gifted learners*. Denver, CO: Love.

This book outlines a planning model and an instructional model. The planning model acknowledges the important roles of curriculum planners, of task analysis, and of the educational climate of a school. The instructional model emphasizes the characteristics of gifted learners, philosophy and goals, student goals, learner outcomes, and classroom implementation, including a scope and sequence. Following an introductory chapter, individual chapters address: (1) research on curriculum models in gifted education; (2) standards of learning and gifted education; (3) developing system-wide curriculum documents; (4) the nature and curriculum needs of gifted learners; (5) developing a philosophy and goals for a gifted program; (6) developing learner outcomes; (7) developing activities and selecting resources; (8) selecting instructional strategies; (9) employing appropriate curriculum management strategies; (10) implementing curricula for the gifted; (11) assessment of learning and evaluation of curriculum; and (12) toward coherent policy in gifted education. (ERIC abstract)

VanTassel-Baska, J., & Stambaugh, T. (2006). *Comprehensive curriculum for gifted learners (3<sup>rd</sup> ed.)*. Boston: Allyn & Bacon.

Section II of this book specifically outlines how national standards and outcomes can be adapted for gifted learners. Examples of a standard for regular education outcomes and more challenging standards for gifted learners are listed for mathematics, social studies, science, and reading. Selected chapters from Section I and Section IV also provide examples of Written Education Plans and forms for gifted learners.

### Practice-based References

*National Association for Gifted Children Pre-K-12 Program Standards*. Retrieved from <http://www.nagc.org/webprek12.htm> on March 30, 2005.

The National Association for Gifted Children suggests program standards in seven areas including program design, identification, program evaluation, curriculum and instruction, program administration and management, social-emotional guidance and counseling, and professional development. The program standards suggest considering issues outside the field of gifted education (e.g. standards) and also recommend a continuum of services with individualized differentiated education plans for gifted students.

Tomlinson, C. A. (2000). Reconcilable differences? Standards-based teaching and differentiation. *Educational Leadership*, 58(1), 6-11 SL W.

This article provides a rationale for how standards and differentiation align. Standards can serve as a foundation for all learners but how teachers present information as well as the level of depth or pacing provided can be differentiated.

VanTassel-Baska, J. (2004). *The acceleration of gifted students' programs and curriculum*. Waco, TX: Prufrock Press.

This teacher-friendly book outlines the rationale for acceleration, the types of acceleration, and provides various usable forms and examples of ways teachers can collapse the curriculum, use diagnostic-prescriptive teaching, write education plans tailored to student needs, and effectively document and proactively plan for gifted children's growth and acceleration in school.

## Standard 7: Instructional Planning

### GT7S2

**Design differentiated learning plans for individuals with gifts and talents, including individuals from diverse backgrounds.**

#### Research-based References

Friedman, R. C., & Lee, S. W. (1996). Differentiating instruction for high-achieving/gifted children in regular classrooms: A field test of three gifted-education models. *Journal for the Education of the Gifted*, 19(4), 405-436.

A multiple baseline design was used to evaluate 3 cognitive-process-oriented models of gifted education implemented by 7 general-education teachers in their 4th- and 5th-grade classrooms with a total of 137 students. The study focused on process-oriented dependent variables such as cognitive complexity (i.e., cognitive level of teacher queries and student responses) and student involvement in school work. While none of the models showed dramatic changes in cognitive complexity of teacher-student interaction, the cognitive-affective interaction model (F. E. Williams, 1986) demonstrated the best results for increasing the cognitive complexity of classroom interactions and on-task behavior of high-achieving students. A strong relationship was found between the cognitive level of teacher queries and student responses across all models. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

#### Literature/Theory-based References

Maker, C. J., & Nielson, A. G. (1996). Curriculum development and teaching strategies for gifted learners. (2nd ed.) Austin, TX: Pro-Ed.

Using a definition of giftedness based on the Multiple Intelligences theory of Howard Gardner, the authors explain and give many practical examples for designing and implementing curriculum to meet the needs of gifted students in regular classrooms and in special programs. The principles are explained in chapters on learning environment, content, process, and product, and examples of daily planning, unit development, and school or district-wide curriculum sequencing are provided. (Author)

Renzulli, J. S., Leppien, J. H., & Hays, T. S. (2000). The multiple menu model: A practical guide for developing differentiated curriculum. Mansfield Center, CT: Creative Learning Press.

The Multiple Model Menu provides six practical planning guides for menus that all teachers, K-12, can use to design in-depth curriculum units for classroom use. Based on the work of theorists in curriculum and instruction, it differs from traditional approaches to curriculum design in that it places a greater emphasis on balancing authentic content and process, involving students as firsthand inquirers, and exploring the structure and interconnectedness of knowledge.

The menus encourage teachers to design in-depth curriculum units that bring together an understanding of the structure of a discipline, its content and methodologies, and the wide range of instructional techniques teachers use to create teaching and learning experiences.

#### Practice-based References

*National Association for Gifted Children Pre-K-12 Program Standards*. Retrieved from <http://www.nagc.org/webprek12.htm> on March 30, 2005.

The National Association for Gifted Children suggests program standards in seven areas including program design, identification, program evaluation, curriculum and instruction, program administration and management, social-emotional guidance and counseling, and professional development. The program standards suggest considering issues outside the field of gifted education (e.g. standards) and also recommend a continuum of services with individualized differentiated education plans for gifted students.

Reis, S. M., Burns, D. E., & Renzulli, J. S. (1992). *Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students*. Mansfield Center, CT: Creative Learning Press.

This book provides strategies and forms as well as a rationale for teachers to compact the curriculum based on student pre-assessments. Once students demonstrate mastery of a given topic through pre-assessment options, students are provided contracts or individual plans for independent study opportunities.

Rogers, K. (2002). *Re-forming gifted education: Matching the program to the child*. Scottsdale, AZ: Great Potential Press.

Research, best practice, and experiential wisdom from the field of gifted education are shared in this how-to book on instructional and management strategies that work in gifted education. Written education plans are emphasized for gifted learners based on their individual needs.

VanTassel-Baska, J. (2004). *The acceleration of gifted students' programs and curriculum*. Waco, TX: Prufrock Press.

This teacher-friendly book outlines the rationale for acceleration, the types of acceleration, and provides various usable forms and examples of ways teachers can collapse the curriculum, use diagnostic-prescriptive teaching, write written education plans tailored to student needs, and effectively document and proactively plan for gifted children's growth and acceleration in school.

## Standard 7: Instructional Planning

### GT7S3

#### Develop scope and sequence plans for individuals with gifts and talents.

#### Literature/Theory-based References

Maker, J. (2004). Developing scope and sequence in curriculum. In J. VanTassel-Baska *Curriculum for gifted and talented students*. Thousand Oaks, CA: Corwin Press.

This seminal article written for *Gifted Child Quarterly* outlines step-by-step guidelines and considerations for writing a scope and sequence for gifted learners so educators may ensure that the understandings, skills, and values intended in gifted education programs are taught and how they fit together throughout the child's academic career.

VanTassel-Baska, J., & Stambaugh, T. (2006). Developing key curriculum products. In J. VanTassel-Baska (Ed.) *Comprehensive curriculum for gifted learners* (3<sup>rd</sup> ed.). Boston: Allyn & Bacon.

This chapter outlines how educators can develop a scope and sequence as well as individualized learning plans for gifted students as part of systemic planning for gifted individuals. Sample learning plans and scope and sequence examples are included for varied content and process domains.

VanTassel-Baska, J. (2003). *Curriculum planning and instructional design for gifted learners*. Denver, CO: Love.

This book outlines a planning model and an instructional model. The planning model acknowledges the important roles of curriculum planners, of task analysis, and of the educational climate of a school. The instructional model emphasizes the characteristics of gifted learners, philosophy and goals, student goals, learner outcomes, and classroom implementation, including a scope and sequence. Following an introductory chapter, individual chapters address: (1) research on curriculum models in gifted education; (2) standards of learning and gifted education; (3) developing system-wide curriculum documents; (4) the nature and curriculum needs of gifted learners; (5) developing a philosophy and goals for a gifted program; (6) developing learner outcomes; (7) developing activities and selecting resources; (8) selecting instructional strategies; (9) employing appropriate curriculum management strategies; (10) implementing

curricula for the gifted; (11) assessment of learning and evaluation of curriculum; and (12) toward coherent policy in gifted education. (ERIC abstract) (Lit)

### Practice-based References

VanTassel-Baska, J. (2003). *Curriculum Planning & Instructional Design for Gifted Learners*. Denver, CO: Love.

The appendices in this book (pp. 273-348) provide curriculum units based on scope and sequence plans for gifted learners in a variety of discipline areas spanning grades 4 to 10. Each of the four units spells out the instructional purpose, materials, activities and questions, assessment, homework, and extensions.

## Standard 7: Instructional Planning

### GT7S4

**Select curriculum resources, strategies, and product options that respond to cultural, linguistic, and intellectual differences among individuals with gifts and talents.**

### Research-based References

Uresti, R., Goertz, J., & Bernal, E.M. (2002). Maximizing achievement for potentially gifted and talented and regular minority students in a primary classroom. *Roeper Review*, 25, 27-31.

The purpose of the study was to try and meet the cognitive, emotional, and social needs of young, culturally and linguistic different children in an inclusive classroom, using the Autonomous Learner Model of Orientation to the Center, Individual Development, and Enrichment Activities. Student scores improved from previous test scores on the Iowa Test of Basic Skills or the Spanish Assessment of Basic Education in reading, language and math. It was concluded that self-directed learning and center activities may cultivate potential giftedness.

### Literature/Theory-based References

Boothe, D. & Stanley, J. C. (Eds.) (2004). *In the eyes of the beholder: Critical issues for diversity in gifted education*. Waco, TX: Prufrock Press.

This book offers the most extensive look available at how gifted education can rise to encourage a more diverse student population and become enriched by the diversity of those children. This book looks specifically at diversity in gifted education as it relates to race, gender, and socioeconomic status. Topics include the identification of giftedness among an increasingly diverse population of students; specific service modifications to address diversity; improved counseling and guidance; and specific curricular and pedagogical methods for supporting the success of every gifted child. (PsycINFO Database Record (c) 2005 APA, all rights reserved).

Castellano, J. A. (2002). Gifted Education Program Options: Connections to English-Language Learners. In J. A. Castellano & E. I. Diaz (Eds.). *Reaching new horizons: Gifted and talented education for culturally and linguistically diverse students*. Boston: Allyn & Bacon.

This book provides 14 readings on issues in the education of gifted and talented students from culturally or linguistically diverse populations. Its overall theme is the insoluble and reciprocal dependence of excellence and equity in education. This chapter offers program options for English language learners.

Ford, D. (1996). *Reversing underachievement among gifted black students: Promising practices and programs*. New York: Teachers College Press.

This book outlines the problems in defining, identifying, programming, retaining, and providing thoughtful solutions for the education of gifted, potentially gifted, and underachieving African American students. With a newly developed federal definition of giftedness, it is important to ensure that African American

students benefit from gifted and talented programs. Reasons why black students may underachieve and practical ways in which teachers can provide positive, high level learning experiences to reduce underachievement in minority populations are given.

Granada, J. (2002). Addressing the Curriculum, Instruction, and Assessment Needs of the Gifted Bilingual/Bicultural Student. In J. A. Castellano & E. I. Diaz (Eds.). *Reaching New Horizons: Gifted and Talented Education for Culturally and Linguistically Diverse Students*. Boston: Allyn & Bacon.

In chapter 7 of this edited volume, Granada outlines the general considerations to be borne in mind when designing curriculum, instruction and assessment for the gifted bilingual and bicultural child.

VanTassel-Baska, J. (2003). *Content-based curriculum for low income and minority gifted learners* (RM03180). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph addresses planning and developing curricula for low income and minority gifted learners. Issues discussed include collaboration among professionals working with these students, choice of school program delivery models, involvement of parent and community support systems in nurturing potential, and curriculum interventions directed toward the needs and profiles of this population. New directions for future curriculum and program design for use with low income and minority gifted learners are also discussed.

Winzer, M.A., & Mazurak, K. (2000). *Special Education in Multicultural Contexts*. Prentice Hall. Inc.

This book examines the impact of cultural and linguistic diversity on the learning of children with disabilities and giftedness, and explores multicultural education and the ways that multicultural perspectives can be taught to children with disabilities. Five major sections discuss: the foundations of multicultural education, multicultural education for students with special needs, pathways to learning, bridges to the curriculum, and ways to promote language and literacy. Chapters 10 to 14 are particularly relevant: (10) modifying the school and classroom climate; (11) learning styles and instructional formats; (12) infusing multicultural content; (13) the language learning environment; and (14) literacy instruction.

### Practice-based References

Avery, L. D., & Zuo, L. (2003). Selecting resources and materials for high-ability learners. In J. VanTassel-Baska & C. A. Little (Eds.). *Content-based curriculum for high ability Learners* (pp. 259-278). Waco, TX: Prufrock Press.

This chapter provides specific selection criteria for determining resources for gifted students and also lists suggested curriculum or supplemental resources in each content area that could be utilized by educators working with gifted learners.

Ford, D. Y., & Harris, J. J. (1998). *Multicultural gifted education*. New York: Teachers College Press.

Lesson plans and examples that incorporate multiculturalism are listed in this teacher-friendly book. Ideas for incorporating multiculturalism into service learning opportunities, readings, discussions, and units are provided.

Norton, D.E. & Norton, S. (2002). *Through the eyes of a child: An introduction to children's literature* (6<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice-Hall.

In this book, the authors provide a series of questions related to the selection of multicultural literature and its appropriateness for students and use in the classroom. Three reasons why multicultural literature should be promoted are: it builds respect across cultures; it sharpens sensitivity towards characteristics of all individuals and it improves self esteem of individuals who are members of all groups

## Standard 7: Instructional Planning

## GT7S5

**Select and adapt a variety of differentiated curricula that incorporate advanced, conceptually challenging, in-depth, distinctive, and complex content.**

### Research-based References

Gallagher, S. A., & Stepien, W. (1996). Content acquisition in problem-based learning: Depth versus breadth in American studies. *Journal for the Education of the Gifted, 19*, 257-275.

One hundred sixty seven high school students' scores on multiple-choice standardized tests were compared after traditional and experimental instruction. In the experimental curriculum students used data and varying perspectives to resolve problems related to a variety of dilemmas such as the Salem witch trials, the use of the nuclear bomb on Hiroshima, and so on. Results indicated that students in problem-based learning classes did not sacrifice content acquisition in American Studies when compared to students learning in more traditional settings.

VanTassel-Baska, J., Bass, G., Ries, R., Poland, D., & Avery, L. D. (1998). A national study of science curriculum effectiveness with high ability students. *Gifted Child Quarterly, 42*, 200-211.

The study assessed the growth of 1,471 4-6th graders on integrated science process skills after being taught a 20-36 hour science unit. The prototypical unit, Acid, Acid Everywhere, was implemented in 15 school districts across 7 states. All units were based on the Integrated Curriculum Model developed specifically for gifted learners. Results indicate small, but significant gains for students in integrated science process skills when compared to equally able students not using the units. Implementation data reflected satisfaction of teachers with the units, especially in terms of student interest and motivation. (PsycINFO Database Record (c) 2004 APA, all rights reserved).

VanTassel-Baska, J., Johnson, D. T., Hughes, C. E., & Boyce, L. N. (1996). A study of language arts curriculum effectiveness with gifted learners. *Journal for the Education of the Gifted, 19*, 461-480.

Using the Integrated Curriculum Model framework and graphic organizers that promote higher level thinking in the language arts, control and experimental students were assessed pre and post treatment using performance-based assessments in writing, grammar, and literary analysis. The students in the experimental group significantly improved in all three dimensions of the assessment and outperformed the control group.

### Literature/Theory-based References

VanTassel-Baska, J., & Stambaugh, T. (2006). Curriculum design issues in developing a curriculum for the gifted. In *Comprehensive curriculum for gifted learners (3<sup>rd</sup>)*. Boston, MA: Allyn & Bacon. Processes for selecting and designing curriculum for gifted learners are suggested as well as goals and outcomes specific to gifted learner needs including specific instructional approaches and assessment of differentiated tasks. Questions for consideration when selecting or adapting curriculum for advanced learners are posed through the content, process/product, and concept dimensions of learning.

Purcell, J. H., Burns, D. E., Tomlinson, C.A., Imbeau, M. B., & Martin, J. L. (2002). Bridging the gap: A tool and technique to analyze and evaluate gifted education curricular units. *Gifted Child Quarterly, 46*, 306-338.

Research on the quality of educational standards, our knowledge about the quality of textbooks, and the performance of high-achieving students on international assessments all point to the need for exemplary curricula for gifted and talented young people. The gap between research in these areas and the needs of gifted and talented learners is startlingly clear. This article includes information about the development of a rubric that was originally designed to assess the quality of curricular units that are submitted annually to the National Association for Gifted Children (NAGC) Curriculum Division's Curriculum Competition. The article also includes information about 4 different, but related, uses for the rubric. Ultimately, we hope that the use of this tool and assessment technique by practitioners across the country will begin to close the enormous gap between the learning needs of gifted and talented young people and curricula.

Roberts, J. L. & Roberts, R. A. (2005). Writing units that remove the learning ceiling. In F. Karnes & S. Bean (Eds.) *Methods and materials for teaching the gifted* (pp. 179-210). Waco, TX: Prufrock Press.

This chapter provides practical examples and explains steps involved and components needed to write a unit for gifted learners that allow them to excel. The steps involved include: selection of a universal theme, writing generalizations based on the theme, identifying a topic of study, identifying core content and complex content related to the topic, designing post-assessments and culminating activities, and designing learning experiences that incorporate content, process, and product options.

Tomlinson, C. (1995). *Differentiating instruction for advanced learners in the mixed-ability middle school classroom*. ERIC Digest E536.

This brief paper summarizes guidelines for adapting instruction for advanced learners in inclusive, mixed-ability middle school classrooms. A rationale for differentiating instruction is followed by consideration of what differentiation is and is not. Characteristics of a differentiated class are enumerated, including: instruction is concept focused and principle driven, on-going assessment of student readiness and growth is built into the curriculum, and flexible grouping is consistently used. Suggested ways to differentiate instruction are grouped into interest-based adjustments, adjustments based on learning profile, and readiness-based adjustments. These last adjustments involve offering students a range of learning tasks developed along eight continua as follows: (1) concrete to abstract, (2) simple to complex, (3) basic to transformational, (4) fewer facets to multi-facets, (5) smaller leaps to greater leaps, (6) more structured to more open, (7) less independence to greater independence, and (8) slower to quicker. Suggested strategies for managing a differentiated classroom include: use of multiple texts and supplementary materials, interest centers, learning contracts, compacting, and group investigation. Teachers are urged to prepare students and parents for a differentiated classroom, attend to issues of classroom structure and management, and plan with team members and other colleagues interested in differentiation. (ERIC abstract).

### **Practice-based References**

Avery, L. D. & Zuo, L. (2003). Selecting resources and materials for high-ability learners. In J. VanTassel-Baska & C.A. Little (Eds.). *Content-based curriculum for high ability Learners* (pp. 259-278). Waco, TX: Prufrock Press.

This chapter provides specific selection criteria for determining resources for gifted students and also lists suggested curriculum or supplemental resources in each content area that could be utilized by educators working with gifted learners.

Riley, T. R. (2005). Teaching on a shoestring: Materials for teaching gifted and talented students. In F. Karnes & S. Bean (Eds.) *Methods and materials for teaching the gifted*. (2<sup>nd</sup> ed., pp. 657-700). Waco, TX: Prufrock Press.

This chapter outlines why differentiation is important and provides educators with how to decide on materials that are differentiated for gifted learners, including for selection, how to search for materials, how to find free and inexpensive materials, and a list of teacher resources, publishing companies, and websites that will assist them with differentiation.

Tomlinson, C. A. & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades 5-9*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A. & Cunningham-Eidson, C. (2003). *Differentiation in practice: A resource guide for differentiating curriculum, grades K-5*. Alexandria, VA: Association for Supervision and Curriculum Development.

Both of these books outline how to adapt curriculum to differentiate instruction for specific grade levels, as indicated, using tiered lessons as a basis for instruction and grouping students based on interest, readiness, and/or learning profiles.

Winebrenner, S. (2003). *Teaching gifted kids in the regular classroom* (2<sup>nd</sup> ed.). Minneapolis, MN: Free Spirit.

This teacher-friendly book provides forms, templates, and examples of ways teachers can adapt instruction through the pre-assessment of student learning and provision of alternate activities based on student interest.

## Standard 7: Instructional Planning

### GT7S6

**Integrate academic and career guidance experiences into the learning plan for individuals with gifts and talents.**

#### Research-based References

Ford, D. Y., & Harris, J. J. (1997). A study of the racial identity and achievement of Black males and females. *Roeper Review*, 20, 105-110.

This study of 152 Black males and females found that 62 students were underachieving and had less positive racial identities than achieving students. Suggestions for reducing underachievement including a counseling focus to help some Black students cope with the difficulties of being in a predominately White gifted program (e.g., negative peer pressures, poor peer relations, feelings of isolation, and sensitivity about feeling different).

Siegle, D., & McCoach, D. B. (2005). Extending learning through mentorships. In F. Karnes & S. Bean (Eds.) *Methods and materials for teaching gifted*, 2<sup>nd</sup> ed. (pp. 473-518). Waco, TX: Prufrock Press.

A research base regarding the effectiveness of mentorships is outlined including the benefits of mentoring to mentees and mentors, alike. Procedural considerations for implementing mentorship programs in schools are thoroughly discussed including tips, caveats, and examples of a secondary mentorship program design. Accommodations for special populations and telementoring options are also included.

#### Literature/Theory-based References

Cline, S., & Schwartz, D. (2000). *Diverse populations of gifted children: Meeting their needs in the regular classroom and beyond*. Columbus, OH: Prentice-Hall.

This book examines ways in which teachers can help these students reach their potential. The first section of the book, "Background for Changing the Present Educational Paradigm," includes chapters that discuss reasons for the failure to integrate gifted education into the fabric of the school and the relationships between multiple intelligences philosophy and the curriculum. Section 2, "Twice Exceptional: Gifted Children with Disabilities," discusses the need to include gifted children with physical disabilities in the regular classroom, how to identify and support gifted children with sensory disabilities, challenges involved in educating children with learning disabilities, and gifted students who have attention deficit disorders. Section 3, "Special Populations of Gifted Children," includes discussions of gifted children from diverse backgrounds, exceptionally gifted children, young gifted children, and gifted females. Section 4, "Issues and Concerns: Addressing the Needs of Students with Exceptional Abilities in the Twenty-First Century," presents different views regarding the social and emotional development of the gifted and the need to change the focus of the educational paradigm from a deficit model to a strength model. (ERIC abstract).

Ford, D. (1996). *Reversing underachievement among gifted black students: Promising practices and programs*. New York: Teachers College Press.

This book describes reasons why black students may underachieve and outlines practical ways in which teachers can provide positive, high level learning experiences to reduce underachievement in minority populations. Chapters 3 and 4 address issues such as underachievement, strategies for reversing underachievement, and social factors as correlates of underachievement. Chapters 5 and 6 assess

cultural factors as correlates of underachievement, resistance to crossing cultural borders, psychological factors as correlates of underachievement, and barriers to meeting the psychological needs of gifted black students. Chapters 7 and 8 investigate gender issues in underachievement and educational attainment, school influences on underachievement, and multicultural education.

Wessel, L. E. (1999). *Career counseling for gifted students: Literature review and critique*. ERIC Document Reproduction Services No. ED427267)

Career counseling for gifted students has proven problematic because traditional methods of career assessment are not appropriate for use with this population. During the last decade, research regarding career counseling for gifted individuals has focused on three areas: multipotentiality, values-based career counseling and assessment, and special populations, such as females and minorities. Literature from each of these areas is reviewed and a critique of the current research available regarding each topic is offered. Suggestions for future research are provided.

### **Practice-based References**

Berger, S. (1989). *College planning for gifted students*. Reston, VA: The Council for Exceptional Children.

This practical guide provides ideas, forms, and guidance for gifted students getting ready to enter college. Topics include: what colleges look for, what students should be doing and what courses they should take at different grade levels, college entrance exams, and learning about different colleges.

Hébert, T. P. (1998). Gifted Black males in an urban high school: Factors that influence achievement and underachievement. *Journal for the Education of the Gifted*, 21, 385-414.

Based on two in-depth case studies of gifted African American males in an urban high school, it was found that factors that influenced underachievement appear to be an inappropriate match with the curricular activities and learning style, inappropriate counseling and class placement, and inconsistent family role models. The authors suggest the importance of training counselors for diversity, working closely with families, and providing enrichment activities outside the school days.

Kerr, B., & Sodano, S. (2003). Career assessment with intellectually gifted students. *Journal of Career Assessment*, 11, 168-186.

Career counseling with the intellectually gifted requires awareness of general concerns regarding this population as well as specific issues that may affect gifted males, females, and minorities. Use of career assessment instruments requires attention to their appropriateness for the gifted as well as gender and cultural bias. (ERIC abstract).

## Standard 8: Assessment

Assessment is integral to the decision-making and teaching of educators of the gifted as multiple types of assessment information are required for both identification and learning progress decisions. Educators of the gifted use the results of such assessments to adjust instruction and to enhance ongoing learning progress. Educators of the gifted understand the process of identification, legal policies, and ethical principles of measurement and assessment related to referral, eligibility, program planning, instruction, and placement for individuals with gifts and talents, including those from culturally and linguistically diverse backgrounds. They understand measurement theory and practices for addressing the interpretation of assessment results. In addition, educators of the gifted understand the appropriate use and limitations of various types of assessments. To ensure the use of nonbiased and equitable identification and learning progress models, educators of the gifted employ alternative assessments such as performance-based assessment, portfolios, and computer simulations.

### GT8K1

#### Processes and procedures for the identification of learners with gifts and talents.

##### Research-based References

Avery, L. D., & VanTassel-Baska, J. (2001). Investigating the impact of gifted education evaluation at state and local levels: Problems with traction. *Journal for the Education of the Gifted*, 25, 153-176.

Two gifted program evaluations found an absence of data on student learning, fragmentation of service models across the K-12 expanse, and a lack of systemic staff-development strategies and parent involvement. Insufficient resource bases and complex leadership demands that required movement on multiple fronts simultaneously created barriers to data utilization.

Gagné, F., & Gagnier, N. (2004). The socio-affective and academic impact of early entrance to school. *Roeper Review*, 26, 128-138.

How well do early school entrants adjust socio-affectively when compared to their regularly admitted peers? Despite numerous publications on the subject, much controversy remains, mainly because of methodologically fragile studies. To assess the impact of a new early entrance policy in Quebec, 36 kindergarten and 42 Grade 2 teachers who had at least one early entrant in their class ranked all their students on four bipolar dimensions (conduct, social integration, academic maturity, and academic achievement). Data were collected for 98 early entrants and 1,723 regularly admitted children. The results revealed no substantial differences between the two groups, but a low correlation between age and adjustment among regularly admitted students. A semi-qualitative analysis showed that the teachers judged a significant percentage of early entrants less than well adjusted.

Mantzicopoulos, P. Y. (2000). Can the Brigance K & 1 screen detect cognitive/academic giftedness when used with preschoolers from economically disadvantaged backgrounds? *Roeper Review*, 22, 185-191.

The accuracy of the Brigance K&1 Screen in the early identification of Head Start children with possible cognitive/academic giftedness was explored with 134 children, 13 of whom were identified as potentially gifted on the K-ABC. These potentially gifted children also performed significantly better on the Brigance than did other children. Teacher ratings were ineffective in detecting potentially gifted children.

Reid, C; Romanoff, B., & Udall, A (2000). An Evaluation of Alternative Screening Procedures. *Journal for the Education of the Gifted*, 23, 378-396.

This study compared the Problem Solving Assessment (PSA) procedure, an application based on Gardner's theory of multiple intelligences, with more traditional criteria for the identification of minority students for gifted education programs. Although positive correlations among approaches and intelligences were observed, different groups of students were identified with each approach; a more diverse population was identified with the PSA procedure.

Rogers, K. B. (1998). Using current research to make “good” decisions about grouping. *NASSP Bulletin*, 82 (595), 38-46.

This article describes a meta-analysis of grouping practices and their effects on different populations of gifted and regular education students. The analysis suggests that grouping is not harmful to lower groups and the highest achievement gains are shown in the gifted group when homogeneously placed. However, differentiated strategies must be present in order for any grouping to be effective.

Tomlinson, C. A., Callahan, C. M., & Lelli, K. M. (1997). Challenging expectations: Case studies of high-potential, culturally diverse young children. *Gifted Child Quarterly*, 41, 5-17.

Project START (Support To Affirm Rising Talent), a three-year collaborative research effort to develop and apply gifted identification procedures based on Howard Gardner's (1983) theory of multiple intelligences attempted to: (1) develop identification procedures; (2) identify high-potential primary age students from culturally diverse and/or low economic backgrounds using the multiple intelligences model; (3) investigate the reliability and validity of the identification procedures; and (4) test the efficacy of specific interventions on student achievement and attitudes about school and self. This article reports findings from eight case studies of START learners.

VanTassel-Baska, J. (2004). Metaevaluation findings: A call for gifted program quality. In J. VanTassel-Baska and A. X. Feng (Eds.), *Designing and utilizing evaluation for gifted program improvement* (pp. 227-245). Waco, TX: Prufrock Press.

This analysis of findings from multiple evaluations serves to substantiate the interwoven nature of problems in the field of gifted education. The author used content coding to derive themes from seven district and state-level program evaluations. Perceptions of the identification process varied with the role of the stakeholder within the identification process. Overall findings indicate a lack of match between identification procedures and program services, a lack of equity and consistency in programs and services across buildings within one district as well as across districts within the state, and a lack of strategies focused on under-represented groups

### Literature/Theory-based References

Birch, J. W. (1984). Is any identification procedure necessary? *Gifted Child Quarterly*, 28, 157-161.

This author argues for replacing identification procedures and traditions with curriculum-imbedded processes for serving gifted students. Recommendations include conducting a full psychoeducational assessment of all students prior to entering formal schooling, using assessment to guide curriculum and instruction, recognizing high in-school achievement as one manifestation of intelligence, and avoiding unidimensional approaches to and definitions of giftedness.

Perleth, C., Schatz, T., & Mönks, F. J. (2000). Early identification of high ability. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.), *International handbook of giftedness and talent* (2nd; pp. 297-316). New York: Pergamon.

This chapter addresses recognizing high ability at an early age and fostering giftedness in the preschool years. The authors describe models of high ability, psychometric assessment of giftedness in young children, personal characteristics of young gifted learners, and environments that support young gifted learners.

Renzulli, J. S., & Delcourt, M. A. B. (1986). The legacy and logic of research on the identification of gifted persons. In J. S. Renzulli (Ed.), *Identification of students for gifted and talented programs* (pp. 71-78). Thousand Oaks, CA: Corwin Press.

The authors assess research on the topics of defining and identifying exceptional potential and propose three alternative criteria to intelligence test scores as the key criterion for identification: a) academic mastery in a domain specific area, b) creative productivity in domain specific or interdisciplinary areas, c) long-range creative productivity.

Rogers, J. A. (1998). Refocusing the lens: Using observation to assess and identify gifted learners. *Gifted Education International*, 12, 129-144

Describes the DISCOVER assessment process, a method designed to identify gifted learners by documenting students' problem-solving abilities in several of Gardner's multiple intelligences, including spatial, mathematical, linguistic, intrapersonal, bodily kinesthetic, and interpersonal. Examples of problems presented to students in grades six through eight and a DISCOVER behavior checklist are provided.

### Practice-based References

Borland, J. H., & Wright, L. (1994). Identifying young, potentially gifted, economically disadvantaged students. *Gifted Child Today*, 38(4), 164-171.

This paper presents a rationale for and description of procedures developed for a grant project identifying economically disadvantaged, potentially gifted kindergarten students in urban schools. The approaches used emphasize the development of on-site methods, observations, dynamic assessment, and the concept of best performance.

Feiring, C., Louis, B., Ukeje, I.; Lewis, M., & Leong, P. (1997). Early Identification of gifted minority kindergarten students in Newark, NJ. *Gifted Child Quarterly*, 41, 76-82.

A screening and assessment procedure has been developed in Newark, New Jersey, to identify gifted inner-city minority kindergarten students. The procedure uses the Brigance K & 1 Screen, a new Gifted Screening intelligence measure, and the McCarthy Scales of Children's Abilities. The procedure has increased identification of gifted students among entering first graders from 0.2% to 2%

Feldhusen, J. F., Asher, J. W., & Hoover, S. M. (2004). Problems in the identification of giftedness, talent, or ability. In J. S. Renzulli (Ed.), *Identification of students for gifted and talented programs* (pp. 79-85). Thousand Oaks, CA: Corwin Press.

Program directors must obtain evidence that their identification procedures are working as intended and that they truly reflect the goals of the program. In order to validate the identification process, data must be collected which indicates that the instruments used to identify students do indeed predict success in the gifted program. Questions of assessments methods, validity, and reliability should be examined as well.

Ford, D. Y., & Trotman, M. F. (2000). The office for civil rights and non-discriminatory testing, policies, and procedures: Implications for gifted education. *Roeper Review*, 23, 109-112.

This article examines the Office for Civil Rights' (OCR) position on non-discriminatory testing, polices and practices and the role and responsibility of the OCR in securing the civil rights of culturally and linguistically diverse students in the context of gifted education. Possible discriminatory practices in gifted education are outlined.

Han, K. S., & Marvin, C. (2000). A five year follow-up study of the Nebraska Project: Still a long way to go. . . *Roeper Review*, 23, 25-33.

This pilot follow-up study examined the current status of students identified as potentially gifted during the 1992 Javits-sponsored Nebraska Project, a study that developed a protocol to provide classroom teachers at the K-2 level with a way to identify able and creative students in small, rural schools and minority cultural groups. While limited by sample size and representation of the original project, the study indicates that non-traditional identification procedures should be examined in follow-up studies to examine their effectiveness and impact upon program practices because many of the students included in the study continued to be unrecognized as potentially gifted. The authors also recommend that changes in identification procedures should be accompanied by professional development for classroom teachers and classroom practices that will recognize nontraditional traits of giftedness.

Johnsen, S. K. (Ed.). (2004). *Identifying gifted students: A practical guide*. Waco, TX: Prufrock Press.

This guidebook recommends internal and external evaluation of policy and procedures related to identifying students for gifted programs. Criteria addressed include identifying specific components of the school division's identification plan to be reviewed; selecting data sources and instrumentation to be used; collecting, organizing, and interpreting the data for the evaluation; writing the evaluation report; and identifying strengths and providing recommendations to improve the program's identification policy and

procedures.

Torrance, E. P. (1984). The role of creativity in identification of the gifted and talented. In J. S. Renzulli (Ed.), *Identification of students for gifted and talented programs* (pp. 17-24). Thousand Oaks, CA: Corwin Press.

The author reviews his personal history as a professional studying the identification of gifted and talented students. Recommended principles for identification policies and procedures include including creativity as a one of multiple criteria for identification, implementing alternative procedures for students with special needs and culturally diverse students, and using a wide variety of valid and reliable indicators.

## Standard 8: Assessment

### GT8K2

**Uses, limitations, and interpretation of multiple assessments in different domains for identifying individuals with exceptional learning needs, including those from diverse backgrounds.**

#### Research-based References

Baum, S., Owen, S. V., & Oreck, B. A. (1996). Talent beyond words: Identification of potential talent in dance and music in elementary students. *Gifted Child Quarterly, 40*, 93-101.

Evidence is presented for the reliability and validity of the Talent Identification Instrument, an observation process in music and dance in which multiple judges rate students throughout a multi-session audition. Strong agreement among raters and adequate stability estimates were found. Factor analysis and construct validity procedures provided support for the measure's validity.

Cunningham, C. M., Callahan, C. M., Plucker, J. A., Roberson, S. C., & Rapkin, A. (1998). Identifying Hispanic students of outstanding talent: Psychometric integrity of a peer nomination form. *Exceptional Children, 64*, 197-209.

This study investigated the reliability and construct validity of a peer nomination form used to identify 670 Hispanic students of outstanding talent from three southwestern school districts. Results indicated adequate reliability, and suggestions are offered for improving the instrument's validity

Hunsaker, S. L., & Callahan, C. M. (1995). Creativity and giftedness: Published instrument uses and abuses. *Gifted Child Quarterly, 39*, 110-114.

Instruments used to measure creativity by 418 school districts as part of their identification procedures for gifted programs were studied. Results indicated that districts often select instruments for assessing creativity without attending to the definition of the construct. Creativity is often assessed in ways that may not be valid or reliable.

Lidz, C. S., & Macrine, S. L. (2001). An alternative approach to the identification of gifted culturally and linguistically diverse learners: The contribution of dynamic assessment. *School Psychology International, 22*, 74-96.

Explores the utility of an alternative approach to identification of gifted culturally and linguistically diverse learners in first to fifth grade in a school with a majority of culturally diverse students. From a population of 473 students, 25 qualified for inclusion in the academically gifted program. Study demonstrates the contribution of dynamic assessment in the identification of

Naglieri, J. A., & Ford, D. Y. (2003). Addressing underrepresentation of gifted minority children using the Naglieri Nonverbal Ability Test (NNAT). *Gifted Child Quarterly, 47*, 155-160.

This study examined the effectiveness of the Naglieri Nonverbal Ability Test (NNAT) in identifying gifted

black and Hispanic students in a total population of 20,270 students (K-12). Analysis indicated that similar percentages of white (5.6%), black (5.1%), and Hispanic (4.4%) children earned an NNAT score in the 95th percentile rank.

Reid, C., Romanoff, B., Algozzine, B., & Udall, A. (2000). An evaluation of alternative screening procedures. *Journal for the Education of the Gifted*, 23, 378-396.

The basic purpose of this study was to describe and analyze the performance of elementary school students on multiple screening measures for identification. Participants were selected from 19 schools which were considered representative of a large and diverse district and were eligible for Title 1 services. Participants engaged in both the *Problem-Solving Assessment* (PSA, a traditional assessment) and the *Matrix Analogies Test* (MAT, an alternative assessment) and were observed by teachers and personnel who had participated in both the PSA and MAT training as well as training in the characteristics of the gifted and multiple intelligences. The authors indicate that placement and identification recommendations were better predicted by PSA scores but that they also found support for moderate concurrent validity between both test measures. Based on their findings, the authors conclude that when alternative assessment measures based on a multiple intelligences theory are utilized, educators cast a broader net enabling them to identify gifted students who would traditionally go unnoticed.

Tomlinson, C. A., Callahan, C. M., & Lelli, K. M. (1997). Challenging expectations: Case studies of high-potential, culturally diverse young children. *Gifted Child Quarterly*, 41, 5-17.

Project START (Support To Affirm Rising Talent), a three-year collaborative research effort to develop and apply gifted identification procedures based on Howard Gardner's (1983) theory of multiple intelligences attempted to: (1) develop identification procedures; (2) identify high-potential primary age students from culturally diverse and/or low economic backgrounds using the multiple intelligences model; (3) investigate the reliability and validity of the identification procedures; and (4) test the efficacy of specific interventions on student achievement and attitudes about school and self. This article reports findings from eight case studies of START learners.

Torrance, E. P. (1993). The beyonders in a thirty year longitudinal study of creative achievement. *Roeper Review*, 15, 131-135.

Initial findings and case studies of a 30-year follow-up of gifted students and adults suggest that characteristics such as love of one's work, persistence, purpose in life, love of challenge, high energy level, and a sense of mission may be more important in the long run than creative ability, intelligence, and high school achievement.

### **Literature/Theory-based References**

Assouline, S. G. (2003). Psychological and educational assessment of gifted children. In N. Colangelo and G. A. Davis (Eds.), *Handbook of gifted education* (3<sup>rd</sup> ed., pp.124-145). Boston: Allyn & Bacon.

The author explores the definition and use of assessments within gifted education. The author proposes that standardized tests can be useful in understanding the learning needs of a gifted students and advocates for the synthesis of information from standardized tests and informal assessment procedures in order to develop programs for gifted students.

Ford, D. Y. (2004). *Intelligence testing and cultural diversity: Concerns, cautions, and considerations* (RM04204). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph examines test bias by reviewing seminal publications and research, discusses intelligence tests with specific attention to interpretations of and explanations for the comparatively low performance of racially and culturally diverse students, explores definitions of and strategies for determining the nature and extent of test bias, and draws implications for the field of gifted education. The conclusion is that regardless of whether one is using traditional intelligence tests or tests considered to be less culturally-loaded, testing, assessment, test interpretation, and test use must be guided by sound, defensible, and equitable principles and practices.

Ford, D. Y., Harris, J. J., III, Tyson, C. A., & Trotman, M. F. (2002). Beyond deficit thinking: Providing access for gifted African American students. *Roeper Review*, 24, 52-58.

This article reviews factors affecting the persistent underrepresentation of black students in gifted education and offers suggestions for recruiting and retaining these students. It is argued that a deficit orientation held by educators hinders access to gifted programs for diverse students, and that too often educators interpret differences as deficits.

Frasier, M. M. (1991). Disadvantaged and culturally diverse gifted students. *Journal for the Education of the Gifted*, 14, 234-245.

This paper reviews research findings and research needs in the area of identification of gifted students from disadvantaged and culturally diverse groups. The Frasier Talent Assessment Profile system is presented as a way to utilize data from test and nontest sources to identify these children.

Passow, A. H., & Frasier, M. M. (1996). Toward improving identification of talent potential among minority and disadvantaged students. *Roeper Review*, 18, 198-202.

Suggestions are made for a new paradigm for identifying talent potential in underserved populations. Suggestions focus on dynamic assessment of gifted behaviors within students' own sociocultural contexts, more varied and more authentic assessment, and integrating identification processes with learning opportunities.

Richert, E. S. (2003). Excellence with justice in identification and programming. In N. Colangelo and G. A. Davis (Eds.), *Handbook of gifted education* (3<sup>d</sup> ed., pp.146-161). Boston: Allyn & Bacon.

The author explores issues in gifted education related to equity and identification. The author recommends equitable practices to identify giftedness in all populations, implementing cost-effective programs that guarantee equity, and incorporating curriculum that fosters equity in identification.

### Practice-based References

Baldwin, A. Y. (2002). Culturally diverse students who are gifted. *Exceptionality*, 10, 139-147.

This article explores the identification of culturally diverse gifted students and provides the following suggestions: train teachers to look for gifted behaviors in different areas, use portfolios in assessments, change perceptions of innate abilities of students, recognize potential that can be developed, and recognize giftedness other than "school house giftedness."

Clark, G. (2004). Screening and identifying students talented in the visual arts: Clark's drawing abilities test. In J. S. Renzulli (Ed.), *Identification of students for gifted and talented programs* (pp. 101-115). Thousand Oaks, CA: Corwin Press.

This article reports the use of the Clark's Drawing Abilities Test and its success in screening and/or identifying students for a visual arts program for artistically gifted students. Significant correlations were obtained among the Clark's test, the Children's Embedded Figures Test, and teacher ratings of students.

Grantham, T. C. (2003). Increasing black student enrollment in gifted programs: An exploration of the Pulaski county special school district's advocacy efforts. *Gifted Child Quarterly*, 47, 46-65.

Results are presented of an advocacy event in Pulaski County, Arkansas, where one school district's efforts to desegregate their gifted program resulted in more black students enrolled. Different phases of a Gifted Program Advocacy Model are used to explain important components of the Pulaski County Special School District's advocacy efforts.

Kirschenbaum, R. J. (1998). The creativity classification system: An assessment theory. *Roeper Review*, 21, 20-26.

Describes the creativity classification system, a taxonomy of creativity that integrates nine dimensions of

creative activity (contact, conscience, interest, fantasy, incubation, creative contact, inspiration, production, and verification). The system is used to categorize measures of creativity to help practitioners apply test results to a profile of creative functioning.

Kirschenbaum, R. J. (1998). Dynamic assessment and its use with underserved gifted and talented populations. *Gifted Child Quarterly*, 42, 140-147.

Highlights dynamic assessment, an approach to assessing cognitive ability in which students are instructed on how to perform on certain tasks and measured on their progress in learning to solve similar problems. This article also describes how dynamic assessment can be used for identifying disadvantaged students for specialized enrichment programs.

Oreck, B.A, Owen, S.V. & Baum, S. M. (2003). *Journal for the Education of the Gifted*, 27, 62-94.

The lack of valid, research-based methods to identify potential artistic talent hampers the inclusion of the arts in programs for the gifted and talented. The Talent Assessment Process in Dance, Music, and Theater (D/M/T TAP) was designed to identify potential performing arts talent in diverse populations, including bilingual and special education students and students who have had no prior formal arts instruction. Research results over 13 years in elementary schools in New York and Ohio provide evidence that creative and artistic potential can be assessed validly and equitably and that such assessments can offer a reliable prediction of success in rigorous arts instruction. (Journal abstract).

## Standard 8: Assessment

### GT8K3

#### Uses and limitations of assessments documenting academic growth of individuals with gifts and talents.

#### Research-based References

Adams, C. M., & Callahan, C. M. (1995). The reliability and validity of a performance task for evaluating science process skills. *Gifted Child Quarterly*, 39, 14-20.

The Diet Cola Test was designed as a process assessment of science aptitude in intermediate grade students. Investigations of the instrument's reliability and validity indicated that data did not support use of the instrument for identifying individual students' aptitude. However, results suggested the test's appropriateness for evaluating effectiveness of programs teaching science process skills.

Bass, G. M., & Ries, R. (1995, April). *Scientific understanding in high ability high school students: concepts and process skills*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED387319). The objectives of this study were: to describe the level of scientific reasoning ability of high school students in a gifted education program and to examine the viability of using analogous problems and questions designed to measure understanding of basic scientific concepts and skills. The results indicate that the development of valid assessments of science understanding is a key need for both individual student assessment and curricular evaluation. Another finding of the study, that even gifted students are not necessarily equal with respect to their ability to solve different kinds of scientific problems, supports the need for rigorous diagnostic assessment of students' conceptual science understanding and calls for increased small group or independent learning activities in science teaching. Recommendations from this study would be to assess gifted students' preconceptions of scientific concepts and to use multiple measures in judging students' scientific understanding since task-specific effects are very likely.

Borland, J. H. (2004). *Issues and practices in the identification and education of gifted students from under-represented groups* (RM04186). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

In this monograph, I discuss the current and historic under-representation of economically disadvantaged

students, students of color, students from ethnic minorities, and students with limited English proficiency in programs for gifted students. I examine the likely causes of the under-representation of these students, drawing on research and theory from psychological, sociological, anthropological, and critical theoretical perspectives. I then present some ideas and practices that show promise for redressing this chronic imbalance. These include both changes in practices that fall within the range of typical gifted program activities (e.g., identification practices) and changes in policy and practice that may enable us to educate more potentially and manifestly gifted students through reconceptualizing the theory and practice of gifted education.

Feng, A. X., VanTassel-Baska, J., Quek, C., Bai, W., & O'Neill, B. (2005). A longitudinal assessment of gifted students' learning using the Integrated Curriculum Model (ICM): Impacts and perceptions of the William and Mary language arts and science curriculum. (On teaching gifted students). *Roeper Review*, 27, 78-84.

This study examines the effects over time of implementing the William and Mary language arts and science curriculum for gifted learners designed around the Integrated Curriculum Model (ICM) in one suburban school district. The study uses stakeholders' perceptions to understand the extent to which stakeholders' perceive a beneficial effect on the students from the curriculum intervention as well as pre-post performance assessments to gauge student learning growth. Findings suggest that gifted student learning can be measured with performance-based assessments.

Gonzalez, V. (1996). Theoretical and practical implications of assessing cognitive and language development in bilingual children with qualitative methods. *Bilingual Research Journal*, 20, 96-131.

Examines methodological problems affecting assessment of bilingual children's cognitive and language development. Analysis of three qualitative instruments used to identify gifted students among Mexican American bilingual kindergartners revealed the influence of first and second language, verbal and nonverbal assessment procedures, multiple measurements and informants, individualized assessment, and evaluators' personalities on the assessment of bilingual children.

Moon, T. R., Brighton, C. M., & Callahan, C. M. (2003). State standardized testing programs: Friend or foe of gifted education? *Roeper Review*, 25, 49-60.

A national survey of 1,289 elementary teachers and focus groups examined effects of state testing programs on instructional practices and implications for gifted students' motivation. Results suggest that testing programs are likely to discourage effective classroom practices and instead lead to teachers engaging in one-size-fits-all practices. Gifted students often report pressure to perform, boredom, disengagement, or sabotage attempts.

Sanders, W.L., & Horn, S.P. (1998). Research findings from the Tennessee value-added assessment system (TVAAS). *Journal of Personnel Evaluation in Education*, 12(3), 247-256.

A comprehensive, longitudinal study of student growth gains on standardized assessments indicated that the teacher is one of the most powerful influences in student growth gains and those students who score in the upper quintile make the least amount of learning gains when compared to students in the middle and lower quintiles on standardized assessments, especially in math.

VanTassel-Baska, J., Bass, G., Ries, R., Poland, D., & Avery, L. (1998). National study of science curriculum effectiveness with high ability students. *Gifted Child Quarterly*, 42, 200-211.

A study involving 60 fifth-grade classrooms assessed student growth on integrated science process skills after being taught a 20-36 hour science unit based on the Integrated Curriculum Model developed for gifted learners. Results indicate small, but significant, gains for students in skills when compared to students not using the unit.

### **Literature/Theory-based References**

Kanevsky, L. (2000). Dynamic assessment of gifted learners. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.), *International handbook of giftedness and talent* (2<sup>nd</sup> ed., pp. 283-295). New York: Pergamon.

This chapter describes how dynamic assessment of gifted learners helps meet the needs of gifted learners. The author also provides an overview of research related to dynamic assessment in the identification process, technical adequacy, and practical application of dynamic assessment.

Maker, J. (1994). Authentic assessment of problem solving and giftedness in secondary school students. *Journal of Secondary Gifted Education*, 6, 19-29.

This paper establishes a conceptual framework for assessing problem-solving abilities of gifted secondary students. Assessment procedures based on a continuum of problem types are described. Issues discussed include multiple types of intelligence, the use of multiple measures, sensitivity to individual differences, and assessment for the student's benefit.

Rogers, K. B. (1991). *The relationship of grouping practices to the education of the gifted and talented learner: Research-based decision making series*. Storrs, CT: National Research Center on the Gifted and Talented, Storrs, CT.

Thirteen research syntheses were analyzed to determine the academic, social, and psychological effects upon learners who are gifted and talented of three grouping practices: (1) ability grouping for enrichment; (2) mixed ability cooperative grouping for regular instruction; and (3) grouping for acceleration. It was concluded that the research showed strong, consistent support for the academic effects of most forms of ability grouping for enrichment and acceleration, but that the research is scant and weak concerning the socialization and psychological adjustment effects of these practices. Claims for the academic superiority of mixed ability grouping or for whole group instructional practices were not substantiated for gifted and talented learners. Other conclusions indicated that: academic outcomes of ability grouping vary substantially from effects reported for average and low ability learners; full time, pullout, and within-class grouping can all produce substantial academic gains; and there is little impact on self-esteem and a moderate gain in attitude toward subject in full time ability grouping.

Treffinger, D. (1994). Productive thinking: Toward authentic instruction and assessment. *Journal of Secondary Gifted Education*, 6, 30-37.

This paper discusses a multicomponent approach to assessment of productive thinking with gifted students. It presents a model of productive thinking encompassing creative and critical thinking, problem solving, and decision making. Emphasis is on planning/profiling, instruction, evaluation, and documentation. Profiling, performance assessment, portfolios, and authentic instruction are seen as important assessment tools.

VanTassel-Baska, J. (2002). Assessment of gifted student learning in the language arts. *Journal of Secondary Gifted Education*, 13, 67-72.

This article discusses important principles for assessing language arts instruction for gifted learners. It stresses the importance of multiple measures and approaches being employed at formative and summative stages of the instructional process. Examples of rubrics, portfolios, and performance-based models are provided, along with ideas for constructing an assessment model.

### **Practice-based References**

Callahan, C. M. (2005). Making the grade or achieving the goal? Evaluating learner and program outcomes in gifted education. In F. A. Karnes & S. M. Bean (Eds.), *Methods and materials for teaching the gifted* (2<sup>nd</sup> ed., pp. 211-246). Waco, TX: Prufrock Press.

The evaluation of learner outcomes is a vital activity in the instructional process and an integrated part of program evaluation process. This chapter focuses on the assessment of both student change and program components that contribute to or detract from student learning. Specifying the expected outcomes of instruction and selecting or designing and then using assessment tools that will assess the important learning outcomes related to effective program components.

Rogers, K. (2002). *Re-forming gifted education: Matching the program to the child*. Scottsdale, AZ: Great

Potential Press.

Research, best practice, and experiential wisdom from the field of gifted education are shared in this how-to book on instructional and management strategies that work in gifted education.

## Standard 8: Assessment

### GT8S1

**Use non-biased and equitable approaches for identifying individuals with gifts and talents, including those from diverse backgrounds.**

#### Research-based References

Cunningham, C. M., Callahan, C. M., Plucker, J. A., Roberson, S. C., & Rapkin, A. (1998). Identifying Hispanic students of outstanding talent: Psychometric integrity of a peer nomination form. *Exceptional Children, 64*(2), 197-209.

This study investigated the reliability and construct validity of a peer nomination form used to identify 670 Hispanic students of outstanding talent from three southwestern school districts. Results indicated adequate reliability, and suggestions are offered for improving the instrument's validity

Masten, W., & Plata, M. (2000). Acculturation and teacher ratings of Hispanic and Anglo-American students. *Roeper Review, 23*, 45-46.

Behavioral checklists and rating scales such as the *Scales for Rating Behavior Characteristics of Superior Students* (SRBCSS) have been suggested as effective methods of identification to correct the underrepresentation of Hispanic students in gifted programs. This study sought to determine the differences between teacher ratings of Hispanic and Anglo-American students based on the student's acculturation level. The sample consisted of 150 5th grade students of either Hispanic or Anglo-American background, 49% of which reported speaking Spanish at least part of the time. The participants' teachers completed four scales of the SRBCSS while each participant completed the Children's Hispanic Background Scale (CHBS). The results indicate that Anglo-American students were rated significantly higher on the Learning, Motivational, Creativity and Leadership scales. There were significant differences between teacher ratings of both groups based on the levels of student acculturation.

Tomlinson, C. A., Callahan, C. M., & Lelli, K. M. (1997). Challenging expectations: Case studies of high-potential, culturally diverse young children. *Gifted Child Quarterly, 41*, 5-17.

Project START (Support To Affirm Rising Talent), a three-year collaborative research effort to develop and apply gifted identification procedures based on Howard Gardner's (1983) theory of multiple intelligences attempted to: (1) develop identification procedures; (2) identify high-potential primary age students from culturally diverse and/or low economic backgrounds using the multiple intelligences model; (3) investigate the reliability and validity of the identification procedures; and (4) test the efficacy of specific interventions on student achievement and attitudes about school and self. This article reports findings from eight case studies of START learners.

VanTassel-Baska, J., Johnson, D., & Avery, L. D. (2002). Using performance tasks in the identification of economically disadvantaged and minority gifted learners: Findings from Project STAR. *Gifted Child Quarterly, 46*, 110-123.

This paper discusses the rationale for developing performance assessment tasks to augment the identification of more economically disadvantaged and minority students in grades 3-6 for gifted programs in one state; provides a blueprint for the development protocol, including preteaching, rubrics, and exemplars; and shows major findings for use of the protocol with intended students. The performance assessment tasks were piloted in multiple districts with more than 4,000 students at primary and intermediate grades. Appropriate technical adequacy data were used for decision making on task and rubric revisions. Criterion levels of performance within domains were developed to ensure inclusion of

populations of interest without compromising the integrity of the task protocols. The performance assessment tasks of Project STAR resulted in finding an additional group of students who were 12 percent African American and 14 percent low-income children during the field test of the instrument. These students represent those who would not have qualified for gifted programs using traditional measures. In that sense, the assessment approach yields a “value-added” component to the state identification system.

### **Literature/Theory-based References**

Frasier, M. M. (1991). Disadvantaged and culturally diverse gifted students. *Journal for the Education of the Gifted*, 14, 234-245.

This paper reviews research findings and research needs in the area of identification of gifted students from disadvantaged and culturally diverse groups. The Frasier Talent Assessment Profile system is presented as a way to utilize data from test and nontest sources to identify these children.

Naglieri, J. A., & Kaufman, J. C. (2001). Understanding intelligence, giftedness and creativity using the PASS theory. *Roeper Review*, 23, 151-156.

This article discusses using the Cognitive Assessment System based on the PASS theory, which centers on Planning, Attention, Simultaneous, and Successive cognitive processes, for identifying gifted children. It is argued that this more extensive and inclusive measure of intelligences could identify gifted children who would not traditionally be identified.

Passow, A. H., & Frasier, M. M. (1996). Toward improving identification of talent potential among minority and disadvantaged students. *Roeper Review*, 18, 198-202.

Suggestions are made for a new paradigm for identifying talent potential in underserved populations. Suggestions focus on dynamic assessment of gifted behaviors within students' own sociocultural contexts, more varied and more authentic assessment, and integrating identification processes with learning opportunities.

### **Practice-based References**

Castellano, J. A. (2002). Renavigating the waters: The identification and assessment of culturally and linguistically diverse students for gifted and talented education. In J. A. Castellano and E. I. Diaz (Eds.), *Reaching new horizons: Gifted and talented education for culturally and linguistically diverse students*. Boston: Allyn & Bacon.

This book provides 14 readings on issues in the education of gifted and talented students from culturally or linguistically diverse populations. Its overall theme is the insoluble and reciprocal dependence of excellence and equity in education. This chapter addresses the identification and assessment needs of culturally and linguistically diverse gifted learners.

Cline, S. (1999). *Suggestions for screening entering kindergarten students to assist in the identification of possibly gifted children*. Solvay, NY: Advocacy for Gifted and Talented Education in New York State. (ERIC Document Reproduction Service No. ED 440489).

This monograph is designed for New York parents and school personnel charged with administering the screening instruments for incoming kindergarten students to determine possible giftedness. It begins by explaining Article 65 of New York's Compulsory Education and School Census Law, Section 3208, which requires that parents be notified if their child is found to be possibly gifted through kindergarten screening. It suggests that school districts use multiple instruments and criteria to assist in this determination and urges that the following be considered as part of the identification procedure: (1) individual IQ tests should be given; (2) information from parents should be included in the screening process; (3) class lessons should be designed to elicit the demonstration of gifted characteristics; and (4) portfolios should be used to enhance the process and provide authentic assessment of ability.

McKenzie, J. A. (1986). The influence of identification practices, race and SES on the identification of gifted students. *Gifted Child Quarterly*, 30, 93-95.

This study reports a survey of 461 New Jersey school districts. Results show significant relationships between G/T participation rates and several demographic criteria, including race, per-pupil spending, and socioeconomic status of school districts.

Ohio State Department of Education, Columbus Division of Special Education. (2000). *Identification of children who are gifted: A technical assistance manual*. Columbus, OH: Author. (ERIC Document Reproduction Service No. ED456580).

This technical assistance manual is designed to provide Ohio school districts with resources and information to aid in the development of appropriate procedures to identify children who are gifted. It is organized to respond to questions that districts may have or need to answer regarding gifted identification and provides information and strategies on which school districts may base decisions regarding the screening and assessment of children who are gifted. 3

Rizza, M. G., & Morrison, W. F. (2003). Uncovering stereotypes and identifying characteristics of gifted students and students with emotional/behavioral disabilities. *Roeper Review*, 25, 73-77.

This study piloted an instrument to examine participants' thinking toward twice exceptional students, specifically those with Emotional/Behavioral Disabilities and gifted and talented behaviors. The participants were preservice teachers enrolled in undergraduate courses and inservice teachers enrolled in graduate courses at two universities. The instrument required participants to categorize an item as describing an EBD behavior, gifted behavior, both or neither. The items were drawn from the literature on EBD and gifted and talented behavior and characteristics. The results indicate that graduate or inservice teachers attributed more characteristics to both the EBD and Gifted groups than preservice teachers, supporting recent research describing differences between novice and experienced teachers. The analysis also revealed stereotyping regarding positive behaviors only associated with gifted and talented; this association could cause some students to be misidentified from a focus only on negative behaviors. The authors caution that the data from this pilot study should only be used to support future research regarding identification of twice-exceptional students and teacher attitude towards student behavior.

Ryser, G. R. (2004). Culture-fair and nonbiased assessment. In S. K. Johnsen (Ed.), *Identifying gifted students: A practical guide*. Waco, TX: Prufrock Press.

This chapter discusses test fairness and barriers that may exclude economically disadvantaged and culturally/linguistically diverse students from gifted programs.

Sternberg, R. J., Grigorenko, E. L., & Ferrari, M. (2004). *Giftedness and expertise* (RM04198). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph explores the relationship between expertise and giftedness, and presents a model of intelligence as developing expertise. The argument, advancing that of Sternberg (1998), is that the traditional view of what intelligence is and of what intelligence tests measure may be incorrect. An alternative view is that of intelligence as developing expertise and intelligence tests as measuring an aspect—typically a limited aspect—of developing expertise. Developing expertise is defined here as the ongoing process of the acquisition and consolidation of a set of skills needed for a high level of mastery in one or more domains of life performance.

## Standard 8: Assessment

### GT8S2

**Use technically adequate qualitative and quantitative assessments for identifying and placing individuals with gifts and talents.**

#### Research-based References

Baum, S., Owen, S. V., & Oreck, B. A. (1996). Talent beyond words: Identification of potential talent in dance and music in elementary students. *Gifted Child Quarterly*, 40(2), 93-101.

Evidence is presented for the reliability and validity of the Talent Identification Instrument, an observation process in music and dance in which multiple judges rate students throughout a multi-session audition. Strong agreement among raters and adequate stability estimates were found. Factor analysis and construct validity procedures provided support for the measure's validity.

Benbow, C. P., & Minor, L. L. (1990). Cognitive profiles of verbally and mathematically precocious students: Implications for identification of the gifted. *Gifted Child Quarterly*, 34(1), 21-26.

This study compared the structure of intelligence of verbally precocious students with that of mathematically precocious students using several test reflecting the primary mental abilities proposed by Thurstone (1938) and others. Results from a factor analysis yielded three factors: spatial/speed, verbal, and nonverbal. These results indicate that a global indicator of intellectual functioning may exclude students with higher nonverbal ability and comparatively lower verbal ability.

Cunningham, C. M., Callahan, C. M., Plucker, J. A., Roberson, S. C., & Rapkin, A. (1998). Identifying Hispanic students of outstanding talent: Psychometric integrity of a peer nomination form. *Exceptional Children*, 64(2), 197-209.

This study investigated the reliability and construct validity of a peer nomination form used to identify 670 Hispanic students of outstanding talent from three southwestern school districts. Results indicated adequate reliability, and suggestions are offered for improving the instrument's validity

Lubinski, D., & Benbow, C. P. (1994). The study of mathematically precocious youth: The first three decades of a planned 50-year study of intellectual talent. In R. F. Subotnik and K. D. Arnold (Eds.), *Beyond Terman: Contemporary longitudinal studies of giftedness and talent* (pp. 255-281). Norwood, NJ: Ablex.

This chapter describes the 50-year longitudinal study conducted by the Study of Mathematically Precocious Youth (SMPY) and presents data that relate to early identification of mathematic or scientific potential. Students' high scores in either verbal or mathematical reasoning ability align with their choice in career path and success in that field.

Lupkowski-Shoplik, A., & Assouline, S. G. (1993). Identifying mathematically talented elementary students: Using the lower level of the SSAT. *Gifted Child Quarterly*, 37, 118-123.

The authors found that the Secondary School Admission Test, which was designed for fifth through seventh graders, discriminated among talented third, fourth and fifth graders in an Iowa and Texas sample. The test identified those who were exceptionally talented and eliminated the ceiling effect for at least 98% of the sample.

Mantzicopoulos, P. (2000). Can the Brigance K & 1 Screen detect cognitive/academic giftedness when used with preschoolers from economically disadvantaged backgrounds? *Roeper Review*, 23, 185-191.

This study explores the predictive value of the *Brigance K & 1*, an instrument that has been used as an identification measure of educationally at-risk students. This study used 134 Head Start preschoolers with a mean age of 61.6 months and an equal number of boys and girls. Racial and ethnic background

information is also included. Students were assessed by the *Kaufman Assessment Battery for Children (K-ABC)*, *Teachers' Ratings of Academic Competence Scale*, and the *Peabody Picture Vocabulary Test* as well as the *Brigance K & 1*. The first set of analyses examined the extent to which participants' scores on the *Brigance's* twelve subtests differed between two groups identified by their scores on the Mental Processing Component of the K-ABC (above or below 115); this analysis also focused on the concurrent and predictive accuracy of the *Brigance* in identifying academic giftedness. Another set of analyses were executed to determine the level of accuracy with which the test could detect the Head Start children who were possibly gifted. Results indicated support for the use of the *Brigance K & 1* test for early identification of gifted children from disadvantaged backgrounds but more empirical data is needed to establish its efficacy.

Tomlinson, C. A., Callahan, C. M., & Lelli, K. M. (1997). Challenging expectations: Case studies of high-potential, culturally diverse young children. *Gifted Child Quarterly*, 41(2), 5-17.

Project START (Support To Affirm Rising Talent), a three-year collaborative research effort to develop and apply gifted identification procedures based on Howard Gardner's (1983) theory of multiple intelligences attempted to: (1) develop identification procedures; (2) identify high-potential primary age students from culturally diverse and/or low economic backgrounds using the multiple intelligences model; (3) investigate the reliability and validity of the identification procedures; and (4) test the efficacy of specific interventions on student achievement and attitudes about school and self. This article reports findings from eight case studies of START learners.

### Literature/Theory-based References

Baird, L. L. (1982). *The role of academic ability in high-level accomplishment and general success*. Princeton, NJ: Educational Testing Service, College Entrance Examination Board.

The relationship of measures of academic ability and grades with high level accomplishment was examined by extensively reviewing a wide ranging literature. This literature included studies of the highly creative, scientists and technicians, physicians, high- and middle-level managers, high school and college students, and the Terman studies of the gifted. Finally, studies of occupational attainment and income were examined. In general, the studies demonstrated low positive relationships between academic aptitude and/or grades, and accomplishment. The closer the content of the measure of academic aptitude to the demands of the field, the stronger the relationship. The full force of academic ability can be seen "across" occupations and ability levels. These studies show that academic ability is related to educational and occupational attainment, broadly defined.

Crammond, B. (1994). The Torrance tests of creative thinking: From design through establishment of predictive validity. In R. F. Subotnik & K. D. Arnold (Eds.), *Beyond Terman: Contemporary longitudinal studies of giftedness and talent* (pp. 229-254). Norwood, NJ: Ablex.

This chapter provides an overview of the life and work of E. Paul Torrance and the creation of the Torrance Tests of Creative Thinking (TTCT). The author provides data from longitudinal research related to predictive validity of the TTCT. The TTCT can be a good predictor of later adult creative achievements with moderate correlation coefficients.

Gonzalez, V. (1996). Theoretical and practical implications of assessing cognitive and language development in bilingual children with qualitative methods. *Bilingual Research Journal*, 20, 96-131. Examines methodological problems affecting assessment of bilingual children's cognitive and language development. Analysis of three qualitative instruments used to identify gifted students among Mexican American bilingual kindergartners revealed the influence of first and second language, verbal and nonverbal assessment procedures, multiple measurements and informants, individualized assessment, and evaluators' personalities on the assessment of bilingual children.

Trost, G. (2000). Prediction of excellence in school, higher education, and work. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.), *International handbook of giftedness and talent* (2<sup>nd</sup> ed., pp. 317-327). New York: Pergamon.

This chapter discusses definitions of excellence used in studies of school and work performance and

reviews the literature related to predicting excellent performance.

Zamora-Duran, G., & Reyes, E. I. (1997). From tests to talking in the classroom: Assessing communicative competence. In A. J. Artiles and G. Zamora-Duran (Eds), *Reducing disproportionate representation of culturally diverse students in special and gifted education*. Reston, VA: Council for Exceptional Children.

This chapter presents guidelines for educators to use to assess students' language proficiency in order to decide whether a more comprehensive assessment or a pre-referral intervention is needed.

### Practice-based References

Feldhusen, J. F., & Jarwan, F. A. (2000). Identification of gifted and talented youth for educational programs. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.), *International handbook of giftedness and talent* (2<sup>nd</sup> ed., pp. 271-282). New York: Pergamon.

This chapter provides an overview of the identification process and how it relates to conceptions of giftedness. The authors describe the phases of the identification process and three approaches to data synthesis and decision-making based on collected criteria.

Jolly, J. L., & Hall, J. R. (2004). Technical information regarding assessment. In S. K. Johnsen (Ed.), *Identifying gifted students: A practical guide*. Waco, TX: Prufrock Press.

This chapter provides a list of questions to use when selecting assessments to use in the identification process for gifted programs. The authors also provide reviews of instruments commonly used in the field of gifted education in relation to their purpose, technical adequacy, and norming information.

Lucas, S. R. (2004). *Evaluation, placement, and progression: Three sites of concern for student achievement* (RM04192). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Three focal features of schools stand out—evaluation, placement, and progression. Students are evaluated, they are placed in curricular locations, and they progress through a system of such placements on their march to adult status. Each one of these features is a site of potential concern to researchers and policy-makers, for the nurturance of every student's capacities, and more specifically for nurturing the capacities of minority students. Considering three illustrative manifestations of these features—testing, tracking, and transitions—in some depth can reveal complexities that attend the educational attainment process.

New Horizons: A Jacob Javits Gifted and Talented Students Education Program. (1997). (ERIC Document Reproduction Service No. ED 416657)

New Horizons, an ArtsConnection comprehensive model for talent identification and development focuses on how schools can identify and appreciate artistic talents, how teachers can help students use their artistic abilities to improve their school performance, and how economically disadvantaged families can take advantage of educational and cultural resources to help children develop gifts and talents. ArtsConnection provided instructional opportunities for students, teachers, and families, and a support structure to help students overcome some of the obstacles they faced in pursuing their talents. Professional artists in dance, music, and theater; curriculum developers and facilitators; teachers and school specialists; and highly supportive parents collaborated in 10 schools to create a program that demonstrated how the arts can help students to achieve both artistic and academic potential. Research conducted throughout the project showed that artistically talented students reading below grade level demonstrated significant improvement in both classroom performance and standardized test scores when involved in a combination of arts instruction and academic assistance that built on their artistic strengths. (Author abstract)

Ryser, G. R. (2004). Qualitative and quantitative approaches to assessment. In S. K. Johnsen (Ed.), *Identifying gifted students: A practical guide*. Waco, TX: Prufrock Press.

This chapter discusses types of assessments used in the identification of gifted learners. The author provides descriptions of different types of qualitative and quantitative assessments commonly used to

identify gifted learners and addresses strengths and weaknesses of each type. Reliability and validity are also addressed.

## Standard 8: Assessment

### GT8S3

**Develop differentiated curriculum-based assessments for use in instructional planning and delivery for individuals with gifts and talents.**

#### Research-based References

Kulik, J. A. (1992). *An analysis of the research on ability grouping: Historical and contemporary perspectives (RBDM 9204)*. Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Meta-analytic reviews have shown that grouping patterns that entail more substantial adjustment of curriculum to ability have clear positive effects on children. Programs of enrichment and acceleration, which usually involve the greatest amount of curricular adjustment, have the largest effects on student learning. In typical evaluation studies, talented students from accelerated classes outperform non-accelerates of the same age and IQ by almost one full year on achievement tests. (Author)

Mills, C.J., Stork, E.J., & Krug, D. (1992). Recognition and development of academic talent in educationally disadvantaged students. *Exceptionality*, 3, 165-180.

Thirty-six students who scored average on standardized achievement tests and were economically disadvantaged were provided with a program to enhance their mathematics or language arts ability. Twenty-eight students served as a comparison group and received no treatment. After the intervention, the majority of students in the treatment group qualified for academically gifted programs.

Swiatek, M. A. (1993). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review*, 15, 120-123.

Five cohorts who participated in the Johns Hopkins University Study of Mathematically Precocious Youth were surveyed at age 19, some at age 23, and some at age 33. Students who choose to accelerate in high school do not suffer academically but gain speed in their educational preparation and enjoy greater success in college.

#### Literature/Theory-based References

Feldhusen, J. F. (1996). Is it acceleration or simply appropriate instruction for precocious youth? *TEACHING Exceptional Children*, 28, 48-51.

Principles of providing appropriate instruction for precocious youth include diagnostic/prescriptive assessment of students' current levels of achievement and readiness for new material; arrangement of instructional conditions so students are working with appropriate curriculum and materials; and provision of classroom learning experiences at the appropriate level, pace, and depth.

Grantham, T. C., & Ford, D. Y. (1998). Principal instructional leadership can reverse the under-representation of black students in gifted education. *NASSP Bulletin*, 82(595), 101-109.

Although black students represent 16% of the student population nationally, they comprise only 8% of the student population in gifted programs. Principals can rectify this situation by focusing on teacher supervision and evaluation, staff development, and quality control. Teachers must be held accountable for providing quality learning experiences and maintaining high academic expectations for all students.

### Practice-based References

Callahan, C. M. (2005). Making the grade or achieving the goal? Evaluating learner and program outcomes in gifted education. In F. A. Karnes & S. M. Bean (Eds.), *Methods and materials for teaching the gifted* (2<sup>nd</sup> ed., pp. 211-246). Waco, TX: Prufrock Press.

The evaluation of learner outcomes is a vital activity in the instructional process and an integrated part of program evaluation process. This chapter focuses on the assessment of both student change and program components that contribute to or detract from student learning. Specifying the expected outcomes of instruction and selecting or designing and then using assessment tools that will assess the important learning outcomes related to effective program components.

Mendaglio, S., & Pyryt, M. C. (1995). Self-concept of gifted students: Assessment-based intervention. *TEACHING Exceptional Children*, 27(3), 40-45.

This article describes the development of a self-perception survey intended for use with gifted students. The article summarizes the scale's theoretical base, characteristics, and scoring. Suggestions are offered for developing appropriate interventions based on assessment results.

## Standard 8: Assessment

### GT8S4

**Use alternative assessments and technologies to evaluate learning of individuals with gifts and talents.**

### Research-based References

Adams, C. M., & Callahan, C. M. (1995). The reliability and validity of a performance task for evaluating science process skills. *Gifted Child Quarterly*, 39, 14-20.

The Diet Cola Test was designed as a process assessment of science aptitude in intermediate grade students. Investigations of the instrument's reliability and validity indicated that data did not support use of the instrument for identifying individual students' aptitude. However, results suggested the test's appropriateness for evaluating effectiveness of programs teaching science process skills.

Feng, A. X., VanTassel-Baska, J., Quek, C., Bai, W., & O'Neill, B. (2005). A longitudinal assessment of gifted students' learning using the Integrated Curriculum Model (ICM): Impacts and perceptions of the William and Mary language arts and science curriculum. (On teaching gifted students). *Roeper Review*, 27, 78-84.

This study examines the effects over time of implementing the William and Mary language arts and science curriculum for gifted learners designed around the Integrated Curriculum Model (ICM) in one suburban school district. The study uses stakeholders' perceptions to understand the extent to which stakeholders' perceive a beneficial effect on the students from the curriculum intervention as well as pre-post performance assessments to gauge student learning growth. Findings suggest that gifted student learning can be measured with performance-based assessments.

### Literature/Theory-based References

Kanevsky, L. (2000). Dynamic assessment of gifted learners. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.), *International handbook of giftedness and talent* (2<sup>nd</sup> ed., pp. 283-295). New York: Pergamon.

This chapter describes how dynamic assessment of gifted learners helps meet the needs of gifted learners. The author also provides an overview of research related to dynamic assessment in the identification process, technical adequacy, and practical application of dynamic assessment.

VanTassel-Baska, J. (2002). Assessment of gifted student learning in the language arts. *Journal of Secondary Gifted Education, 13*, 67-72.

This article discusses important principles for assessing language arts instruction for gifted learners. It stresses the importance of multiple measures and approaches being employed at formative and summative stages of the instructional process. Examples of rubrics, portfolios, and performance-based models are provided, along with ideas for constructing an assessment model.

### Practice-based References

Callahan, C. M. (2005). Making the grade or achieving the goal? Evaluating learner and program outcomes in gifted education. In F. A. Karnes & S. M. Bean (Eds.), *Methods and materials for teaching the gifted* (2<sup>nd</sup> ed., pp. 211-246). Waco, TX: Prufrock Press.

The evaluation of learner outcomes is a vital activity in the instructional process and an integrated part of program evaluation process. This chapter focuses on the assessment of both student change and program components that contribute to or detract from student learning. Specifying the expected outcomes of instruction and selecting or designing and then using assessment tools that will assess the important learning outcomes related to effective program components.

Kirschenbaum, R. J. (1998). Dynamic assessment and its use with underserved gifted and talented populations. *Gifted Child Quarterly, 42*, 140-147.

Highlights dynamic assessment, an approach to assessing cognitive ability in which students are instructed on how to perform on certain tasks and measured on their progress in learning to solve similar problems. This article also describes how dynamic assessment can be used for identifying disadvantaged students for specialized enrichment programs.

Siegle, D. (2002). Creating a living portfolio: Documenting student growth with electronic portfolios. *Gifted Child Today, 25*(3), 60-65.

This article explains how teachers can use electronic portfolios of students' work to document learner progress. It considers different file formats for storing student work, describes steps to creating an electronic portfolio, and discusses an art and literature electronic magazine created by one school featuring work from student portfolios.

## Standard 9: Professional and Ethical Practice

Educators of the gifted are guided by the profession's ethical and professional practice standards. They practice in multiple roles and complex situations across wide age and developmental ranges. Their practice requires ongoing attention to professional and ethical considerations. They engage in professional activities that promote growth in individuals with gifts and talents and update themselves on evidence-based best practices. Educators of the gifted view themselves as lifelong learners and regularly reflect on and adjust their practice. They are aware of how attitudes, behaviors, and ways of communicating can influence their practice. Educators of the gifted understand that culture and language interact with gifts and talents and are sensitive to the many aspects of the diversity of individuals with gifts and talents and their families.

### GT9K1

**Personal and cultural frames of reference that affect one's teaching of individuals with gifts and talents, including biases about learners from diverse backgrounds.**

#### Research-based References

Frasier, M. M., Hunsaker, S. L., Lee, J., Finley, V. S., Frank, E., & Garcia, J. H. et al. (1995). *Educators' perceptions of barriers to the identification of gifted children from economically disadvantaged and limited English proficient backgrounds*. (Report RM-95216). Storrs, CT: National Research Center on the Gifted and Talented.

This report presents results from a 10-item survey of 750 educators from 14 school sites, designed to gain insights into the perceptions educators hold regarding the problems of identifying gifted children from economically disadvantaged and limited English proficient backgrounds. Results indicated that major barriers to identification were test bias and teachers' inability to recognize indicators of potential in certain groups. Five other issues were identified as moderate barriers: students' use of nonstandard English and/or limited proficiency in the English language; differences in language experiences; parents not providing a stimulating home environment; use of narrow screening/selection processes; and teachers' prejudicial attitudes. Three issues were identified as minor barriers: beliefs that intellectual giftedness is not valued by certain groups; teachers' fears about program quality diminishing when minority and economically disadvantaged students participated; and beliefs about the limited number of gifted children who come from economically disadvantaged and limited English proficient backgrounds. The implications of these results for designing staff development programs are discussed.

Masten, W. G., & Plata, M. (2000). Acculturation and teacher ratings of Hispanic and Anglo-American students. *Roeper Review*, 23, 45-46.

This study examined possible differences between teacher ratings of Anglo-American and Hispanic students based on the student's acculturation level in the context of using behavior rating scales to identify students for gifted education programs. Findings indicated significant differences between teacher ratings of Anglo-American and Hispanic students based on the student's acculturation level.

Masten, W. G., Plata, M., Wenglar, K., & Thedford, J. (1999). Acculturation and teacher ratings of Hispanic and Anglo-American students. *Roeper Review*, 22, 64-65.

A study examined differences between teacher ratings of 87 Anglo-American and 63 Hispanic fifth-grade students based on the students' ethnic status and acculturation level. Anglo-American students were rated higher on characteristics relating to learning, motivation, creativity, and leadership. Highly acculturated Hispanic students received higher ratings than did low-acculturated Hispanics.

Peterson, J. S., & Margolin, L. (1997). Naming gifted children: An example of unintended "reproduction." *Journal for the Education of the Gifted*, 21, 82-101.

A study of 55 Anglo-American middle school teachers investigated their recommendations for student

inclusion in gifted programs. Results found the teachers did not nominate any students with limited English proficiency, emphasized the verbal skills of students, and tended to select members of their own culture.

### **Literature/Theory-based References**

Ogbu, J. U. (1999). Beyond language: Ebonics, proper English, and identity in a Black-American speech community. *American Educational Research Journal*, 36, 147-184.

Describes and explains the sociolinguistic factors that affect the performance of black children speaking standard English. Uses data from a 2-year study of black speech and bidialectalism involving 40 adults and 76 students to show how the black community and its children have difficulty learning proper English because of their incompatible beliefs about standard English.

### **Practice-based References**

Castellano, J. A. (2002). Renavigating the waters: The identification and assessment of culturally and linguistically diverse students for gifted and talented education. In J. A. Castellano and E. I. Diaz (Eds.), *Reaching new horizons: Gifted and talented education for culturally and linguistically diverse students*. Boston: Allyn & Bacon.

This book provides 14 readings on issues in the education of gifted and talented students from culturally or linguistically diverse populations. Its overall theme is the insoluble and reciprocal dependence of excellence and equity in education. This chapter addresses the identification and assessment needs of culturally and linguistically diverse gifted learners.

Ford, D. Y., & Trotman, M. F. (2001). Teachers of gifted students: Suggested multicultural characteristics and competencies. *Roeper Review*, 23, 235-239.

This article discusses desired characteristics and competencies in teachers of gifted students who are culturally, ethnically, or linguistically diverse. These include: culturally relevant pedagogy, equity pedagogy, a holistic teaching philosophy, a communal philosophy, respect for students' primary language, culturally congruent instructional practices, culturally sensitive assessment, student-family-teacher relationships, and teacher diversity.

Harmon, D. (2002). They won't teach me: The voices of gifted African American inner-city students. *Roeper Review*, 24, 68-75.

Six gifted African American students (grades 4-5) were bused to a predominately white school and then returned to their predominately African American school. Students identified 6 of 16 teachers as effective. Ineffective teachers were described as having a lack of understanding of African American culture resulting in low academic expectations.

## Standard 9: Professional and Ethical Practice

### GT9K2

#### Organizations and publications relevant to the field of gifted and talented education.

#### Literature/Theory-based References

##### Publications:

*Gifted Child Quarterly (GCQ).*

Gifted Child Quarterly (GCQ) is the National Association for Gifted Children's (Washington, DC) premier peer-reviewed research journal in the field of gifted education. This journal publishes manuscripts that offer new or creative insights about giftedness and talent development in the context of the school, the home, and the wider society. This journal also publishes quantitative or qualitative research studies as well as manuscripts which explore policy and policy implications.

*Journal for the Education of the Gifted (JEG).*

*JEG* is the official publication of The Association for the Gifted, a division of the Council for Exceptional Children (Reston, VA), and is published through a cooperative partnership with Prufrock Press.

*Roeper Review.*

Published by the Roeper School in Michigan, the Roeper Review applies the highest standards of peer review journalism to cover a broad range of issues for professionals who work with teachers and psychologists, and for professionals who work directly with gifted and talented children and their families.

#### Practice-based References

Council for Exceptional Children. (1994). *CEC policies for delivery of services to exceptional children*. Reston, VA: Author

This compilation outlines the Council for Exceptional Children's basic commitments and responsibilities to exceptional children. The policies are intended to set the stage for emerging professional practices and procedures, providing a guideline for those who strive to provide quality education for exceptional learners. Professional policies are grouped according to the following general topics: (1) delivering an appropriate education; (2) coordinating responsibilities with government and community representatives; (3) responsibilities of the school administration; (4) school attendance; (5) creating an environment of support and accountability; (6) early childhood; (7) education of the gifted and talented; (8) managing communicable diseases and students with special health care needs; (9) community-based services; (10) testing; (11) ethnic and multicultural groups; and (12) career education and transition.

Daniel, N., & Cox, J. (1992). International education for high-ability students: An avenue to excellence. *NASSP Bulletin*, 76(543), 87-94.

Both the United World Colleges and the International Baccalaureate offer exciting educational alternatives for high-ability students. Based on international understanding through educational exchange, the World Colleges are composed of students and faculties from many nations and all races. A Houston Theory of Knowledge project to prepare students for stiff International Baccalaureate examination requirement is described.

Landrum, M. S., Callahan, C. M., & Shaklee, B. D. (2000). *Aiming for excellence: Gifted program standards. Annotations to the NAGC pre-k-grade 12 gifted program standards*. Waco, TX: Prufrock Press.

This book is a guide to the standards for programs designed for gifted and talented students developed by the National Association for Gifted Students in 1998. The guide is intended to provide practical help to practitioners by including annotations that supply a rationale and further explanations for each standard.

A standard statement, description, rationale, lists of benefits and potential barriers to implementation, and examples of meeting the standard at the minimum and exemplary levels are given for each standard. Individual chapters are: (1) "Program Design" (Beverly D. Shaklee); (2) "Program Administration and Management" (Mary S. Landrum and others); (3) "Socio-Emotional Guidance and Counseling" (Helen L. Nevitt); (4) "Student Identification" (Susan J. Hansford and others); (5) "Curriculum and Instruction" (Kimberley Chandler); (6) "Professional Development" (Mary S. Landrum); and (7) "Program Evaluation" (Carolyn M. Callahan). An appendix contains the Pre-K-Grade 12 Gifted Program Standards.

### **Organizations:**

*Council for Exceptional Children (CEC).*  
<http://www.cec.sped.org/>

"The Council for Exceptional Children (CEC) is the largest international professional organization dedicated to improving educational outcomes for individuals with exceptionalities, students with disabilities, and/or the gifted. CEC advocates for appropriate governmental policies, sets professional standards, provides continual professional development, advocates for newly and historically underserved individuals with exceptionalities, and helps professionals obtain conditions and resources necessary for effective professional practice." The Association for the Gifted (TAG) is a division of CEC. "The Association for the Gifted (TAG) delivers information to both professionals and parents about gifted and talented children and their needs. Members receive the *Journal for the Education of the Gifted* and the *TAG Update* newsletter."

*National Association for Gifted Children*  
<http://www.nagc.org>

Mission Statement: "The National Association for Gifted Children (NAGC) is an organization of parents, teachers, educators, other professionals and community leaders who unite to address the unique needs of children and youth with demonstrated gifts and talents as well as those children who may be able to develop their talent potential with appropriate educational experiences. We support and develop policies and practices that encourage and respond to the diverse expressions of gifts and talents in children and youth from all cultures, racial and ethnic backgrounds, and socioeconomic groups. NAGC supports and engages in research and development, staff development, advocacy, communication, and collaboration with other organizations and agencies who strive to improve the quality of education for all students."

*Supporting Emotional Needs of the Gifted (SENG).*  
<http://www.sengifted.org/>

"SENG is dedicated to fostering environments in which gifted adults and children, in all their diversity, understand and accept themselves and are understood, valued, nurtured, and supported by their families, schools, workplaces and communities."

National Research Center on the Gifted and Talented.  
<http://www.gifted.uconn.edu/nrcgt.html>

### **Publications:**

*Gifted Child Today.* Waco, TX: Prufrock Press.

*Gifted Child Today* acts as the leading professional magazine for teachers and parents involved in gifted education.

## Standard 9: Professional and Ethical Practice

### GT9S1

**Assess personal skills and limitations in teaching individuals with exceptional learning needs.**

#### Research-based References

Archambault, F. X., Westberg, K. L., Brown, S. W., Hallmark, B. W., Emmons, C. L., & Zhang, W. (1993). *Regular classroom practices with gifted students: Results of a national survey of classroom teachers*. Research Monograph 93102. Storrs, CT: National Research Center on the Gifted and Talented.

The Classroom Practices Survey was conducted to determine the extent to which gifted and talented students receive differentiated education in regular classrooms. Survey samples were third and fourth grade teachers, including a general sample of teachers in public schools (n=3993); teachers in private schools (n=980); and four samples of teachers in public schools with high concentrations of African-American students (n=592), Asian-Americans (n=587), Hispanic-Americans (n=582), and Native Americans (n=580). Approximately 50 percent of teachers surveyed responded. The major finding was that third and fourth grade teachers in all settings make only minor modifications in the regular curriculum to meet the needs of gifted students. Teachers who make provisions for the gifted are likely to assign them advanced readings, independent projects, enrichment worksheets, and reports of various kinds. There were also few differences in regular classroom services between schools with and without formal gifted programs.

Hansen, J. B., & Feldhusen, J. F. (1994). Comparison of trained and untrained teachers of gifted students. *Gifted Child Quarterly*, 38, 115-123.

This study of 82 teachers of gifted students showed that teachers trained in gifted education demonstrated greater teaching skills and developed more positive classroom climates than did teachers who had no training in gifted education. Students of trained teachers reported greater emphasis on higher level thinking skills and on discussion and less emphasis on lecture and grades.

Minor, L. C., Onwuegbuzie, A. J., Witcher, A. E., & James, T. L. (2002). Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers. *Journal of Educational Research*, 96, 116-127.

Surveyed preservice teachers regarding their perceptions of effective teachers' characteristics and whether those perceptions were related to educational beliefs. Respondents believed that many characteristics reflected effective teaching (student centered, effective classroom and behavior manager, competent instructor, ethical, enthusiastic about teaching, knowledgeable about subject, and professional.) There was no relationship between these perceptions and respondents' year of study, educational belief, and preferred grade level for teaching.

Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002). The characteristics of effective and ineffective teachers. *Teacher Education Quarterly*, 29, 39-48.

Investigated the perceptions of novice student teachers, post-student teaching beginning teachers, and experienced teachers regarding the characteristics of effective and ineffective teachers. Themes emerging from respondents' descriptions were: ability to create an appropriate emotional environment, skill in creating an effective learning environment, teacher motivation, emphasis on activities that actively involved students and classroom techniques and grading.

Westberg, K. L., Archambault, F. X., Dobyms, S. M., & Salvin, T. J. (1993). *An observational study of instructional and curricular practices used with gifted and talented students in regular classrooms*. Research Monograph 93104. Storrs, CT: National Research Center on the Gifted and Talented.

This report describes one part of the Classroom Practices Study, focusing on systematic observations of gifted and talented students in 46 third and fourth grade classrooms. The observations were designed to determine if and how teachers meet the needs of gifted and talented students in regular classroom settings. The Classroom Practices Record (CPR) instrument was developed to document the types of differentiated instruction that these students receive. Results indicated that little differentiation in the instructional and curricular practices, including grouping arrangements and verbal interactions, was provided for gifted and talented students in regular classrooms. Across 5 subject areas and 92 observation days, gifted students received instruction in homogeneous groups only 21 percent of the time, and the target gifted and talented or high ability students experienced no instructional or curricular differentiation in 84 percent of the instructional activities in which they participated.

### Literature/Theory-based References

Eyre, D., Coates, D., Fitzpatrick, M., Higgins, C., McClure, L., & Wilson, H. et al. (2002). Effective teaching of able pupils in the primary school: The findings of the Oxfordshire effective teachers of able pupils project. *Gifted Education International*, 16(2), 158-169.

A review of British research on effective teaching of able students leads to a report on the Oxfordshire Effective Teachers of Able Pupils Project. This study found effective teachers shared similar beliefs about learning, had empathy with the needs of able children, created a secure classroom environment, held high expectations, used encouragement and praise, and stressed humor and fun.

Goff, K., & Torrance, E. P. (1999). Discovering and developing giftedness through mentoring. *Gifted Child Today*, 22(3), 14-15, 52-53.

Discusses the importance of mentoring programs for children, particularly for especially creative gifted children from economically disadvantaged backgrounds. It describes characteristics for a successful mentor relationship and ways mentors can help in the expression and development of positive creativity in children.

Heath, W. J. (1997). *What are the most effective characteristics of teachers of the gifted?* (ERIC Document Reproduction Services No. ED411665)

This paper reviews the literature concerning the personal characteristics, professional characteristics, and teaching methods or styles of effective teachers of gifted students. The review is divided into three sections. First, a brief historical overview of gifted education since ancient times is offered. The next section looks at the opinions expressed by experts in the field of gifted education on essential characteristics of teachers of the gifted. The experts generally agreed that standards for teacher training should be established, that the teacher of the gifted should have state certification and/or an endorsement in gifted education, and that the teacher should have high intelligence, an understanding of giftedness, originality, and self-confidence. A table compares four editorial studies that examined experts' listings of desirable teacher characteristics. The bulk of the report reviews empirical studies of teacher characteristics. A table compares 10 such studies. Among desirable teacher characteristics identified by these studies are intelligence, enthusiasm, achievement, drive, self-confidence, promotion of student independence, and a preference for teaching gifted children.

Rogers, K. B. (1989). Training teachers of the gifted: What do they need to know? *Roepers Review*, 11, 145-150.

A model for training teachers to deal effectively with gifted children is proposed. Three levels of training are delineated to meet the needs of the classroom teacher, the cluster/resource teacher of the gifted, and the gifted program administrator. Content and program design are outlined.

### Practice-based References

Castellano, J. A. (2002). Renavigating the waters: The identification and assessment of culturally and linguistically diverse students for gifted and talented education. In J. A. Castellano and E. I. Diaz (Eds.), *Reaching new horizons: Gifted and talented education for culturally and linguistically diverse students*. Boston: Allyn & Bacon.

This book provides 14 readings on issues in the education of gifted and talented students from culturally

or linguistically diverse populations. Its overall theme is the insoluble and reciprocal dependence of excellence and equity in education. This chapter addresses the identification and assessment needs of culturally and linguistically diverse gifted learners.

Cox, J., & Daniel, N. (1984). The MacArthur fellows look back. *Gifted Child Today*, 35, 18-25.

The article describes replies to a questionnaire by recipients of the MacArthur Fellows Program, an award given to individuals with uncommon abilities across a wide spectrum of creative pursuits. Replies touch on school and family backgrounds, acceleration, importance of grades, recognition of achievement, extracurricular activities, and significant teachers.

## **Standard 9: Professional and Ethical Practice**

### **GT9S2**

**Maintain confidential communication about individuals with gifts and talents.**

#### **Literature/Theory-based References**

Klein, J. P., & Lugg, E. T. (2002). Nurturing young adolescents legally and ethically. *Middle School Journal*, 34(1), 13-20.

Discusses legal issues resulting from implementation of an advisory component in a comprehensive middle school program. Focuses on safety issues in team-building activities, confidentiality and reporting issues related to adult advisory roles, and First Amendment issues related to religion. Examines the teacher's legal role. Concludes that understanding the legal issues involved can minimize the legal hazards involved in a comprehensive middle school program.

#### **Practice-based References**

Copenhaver, J. (2002). *Primer for maintaining accurate special education records and meeting confidentiality requirements when serving children with disabilities--Family Educational Rights and Privacy Act (FERPA)*. Logan, UT: Utah State University, Mountain Plains Regional Resource Center.

This manual is intended to provide schools with guidance in complying with federal laws and regulations regarding record keeping and confidentiality in their services to students with disabilities. Part 1 focuses on requirements of the Family Education Rights and Privacy Act (FERPA), which ensures student /parent access to education records and limits disclosures to others. It provides definitions and then summarizes requirements concerning access rights, fees, and prior consent. Fourteen common questions relative to records and confidentiality are answered next. The exceptions to prohibiting disclosure of educational records are highlighted. Part 2 then addresses issues of privacy and confidentiality relating to working with children with disabilities, including general rules for maintaining confidentiality and protecting the privacy of student special education records. Part 3 focuses on special education records and considers staff training, content of special education files, acceptance of special education records, case manager/record locator, and record destruction. Sample forms are provided. Part 4 presents the text of the federal regulations to FERPA.

Keller, J. D. (1999). Deciphering teacher lounge talk. *Phi Delta Kappan*, 81(4), 328-329.

Teachers must learn to discriminate between caring and toxic brands of lounge conversation (summarized in a table). The way that beginning teachers praise, accept, ignore, or refute comments is critical in developing their roles within the school setting. Their enthusiasm can help students and jaded colleagues.

Morehead, M. A. (1998). Professional behaviors for the beginning teacher. *American Secondary Education*, 26(4), 22-26.

Teachers must be more than effective classroom instructors; they must also be good employees and behave professionally. This article discusses issues related to teacher professionalism; positive

attitude/friendliness; relationships with professionals, students, and parents; professional responsibilities outside the classroom; teachers as role models; respectful treatment of nonteaching staff; and confidentiality/discretion.

## Standard 9: Professional and Ethical Practice

### GT9S3

**Encourage and model respect for the full range of diversity among individuals with gifts and talents.**

#### Research-based References

Davalos, R., & Griffin, G. (1999). The impact of teachers' individualized practices on gifted students in rural, heterogeneous classrooms. *Roeper Review*, 21, 308-314.

A study involving six gifted fifth graders investigated the effectiveness of training teachers to differentiate for gifted students' needs by curricular adaptations. When the setting of goals was left to individual trained teachers, some chose goals that were easy to implement and had little or no real impact on instructional techniques.

Frasier, M. M., Hunsaker, S. L., Lee, J., Finley, V. S., Frank, E., & Garcia, J. H. et al. (1995). *Educators' perceptions of barriers to the identification of gifted children from economically disadvantaged and limited English proficient backgrounds*. Report: RM-95216. Storrs, CT: National Research Center on the Gifted and Talented.

This report presents results from a 10-item survey of 750 educators from 14 school sites, designed to gain insights into the perceptions educators hold regarding the problems of identifying gifted children from economically disadvantaged and limited English proficient backgrounds. Results indicated that major barriers to identification were test bias and teachers' inability to recognize indicators of potential in certain groups. The moderate barriers were students' use of nonstandard English and/or limited proficiency in the English language; differences in language experiences; parents not providing a stimulating home environment; use of narrow screening/selection processes; and teachers' prejudicial attitudes, and minor barriers were beliefs that intellectual giftedness is not valued by certain groups; teachers' fears about program quality diminishing when minority and economically disadvantaged students participated; and beliefs about the limited number of gifted children who come from economically disadvantaged and limited English proficient backgrounds. The implications of these results for designing staff development programs are discussed.

Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002). The characteristics of effective and ineffective teachers. *Teacher Education Quarterly*, 29(1), 39-48.

Investigated the perceptions of novice student teachers, post-student teaching beginning teachers, and experienced teachers regarding the characteristics of effective and ineffective teachers. Themes emerging from respondents' descriptions were: ability to create an appropriate emotional environment, skill in creating an effective learning environment, teacher motivation, emphasis on activities that actively involved students and classroom techniques and grading.

#### Literature/Theory-based References

Barkan, J. H., & Bernal, E. M. (1991). Gifted education for bilingual and limited English proficient students. *Gifted Child Quarterly*, 35(3), 144-147.

This article discusses the theoretical basis of and rationale for bilingual gifted education; highlights the points at which the intellectual bases of gifted education and bilingual education intersect; outlines programming practices such as encouraging students to "think in English"; and suggests future directions in the field.

Ford, D. Y., & Harmon, D. A. (2001). Equity and excellence: Providing access to gifted education for

culturally diverse students. *Journal of Secondary Gifted Education*, 12(3), 141-147.

This article maintains that the underrepresentation of diverse students in gifted education programs is due to a "deficit perspective" about culturally diverse populations. Recommendations include identifying and serving underachievers and low socioeconomic-status students, providing educators and gifted students with multicultural education, and developing home-school partnerships.

Heath, W. J. (1997). *What are the most effective characteristics of teachers of the gifted?* (ERIC Document Reproduction Services No. ED411665)

This paper reviews the literature concerning the personal characteristics, professional characteristics, and teaching methods or styles of effective teachers of gifted students. After a brief historical overview of gifted education, the author looks at the opinions expressed by experts in the field of gifted education on essential characteristics of teachers of the gifted. The experts generally agreed that standards for teacher training should be established, that the teacher of the gifted should have state certification and/or an endorsement in gifted education, and that the teacher should have high intelligence, an understanding of giftedness, originality, and self-confidence. The bulk of the report reviews empirical studies of teacher characteristics. A table compares 10 such studies. Among desirable teacher characteristics identified by these studies are intelligence, enthusiasm, achievement, drive, self-confidence, promotion of student independence, and a preference for teaching gifted children.

### Practice-based References

Ford, D. Y., & Trotman, M. F. (2001). Teachers of gifted students: Suggested multicultural characteristics and competencies. *Roeper Review*, 23, 235-239.

This article discusses desired characteristics and competencies in teachers of gifted students who are culturally, ethnically, or linguistically diverse. These include: culturally relevant pedagogy, equity pedagogy, a holistic teaching philosophy, a communal philosophy, respect for students' primary language, culturally congruent instructional practices, culturally sensitive assessment, student-family-teacher relationships, and teacher diversity.

## Standard 9: Professional and Ethical Practice

### GT9S4

**Conduct activities in gifted and talented education in compliance with laws, policies, and standards of ethical practice.**

### Research-based References

Coleman, M. R., & Gallagher, J. J. (1995). State identification policies: Gifted students from special populations. *Roeper Review*, 17, 268-275.

Results are presented of a national survey of state policies regarding identification of gifted students from special populations (culturally diverse families, economic disadvantage, or gifted students with disabilities). Also considered is a followup study on the implementation of state policies in Ohio, Arkansas, and Texas. Future policy directions are recommended.

VanTassel-Baska, J. (1991). *Gifted youth at risk: A report of a national study*. Reston, VA: Council for Exceptional Children.

This study explored the nature and extent of programs and services available for culturally diverse and economically disadvantaged gifted learners. Data were gathered through a questionnaire survey of directors of gifted programs in 49 states and territories and a questionnaire survey of 51 local school districts that have active programs for at-risk gifted learners. Analysis of the state-level data focused on definitions of "disadvantage," program standards for the at-risk gifted population, identification practices, and funding. Besides providing results of the study, this report offers a comprehensive review of the current knowledge about programs and services for the target population. Each chapter offers

policy recommendations, and the report concludes with nine suggestions for a working agenda.

### **Literature/Theory-based References**

Gallagher, J. (2002). *Society's role in educating gifted students: The role of public policy*. Senior Scholars Series. (Report RM02162). Storrs, CT: National Research Center on the Gifted and Talented.

This monograph reviews the role played by public policy in the education of gifted students. It describes the special rule making in identification, placement, program, and accountability. These rules emerge from legislation, court decisions, administrative rule making, and professional standards. Special problems involving racial discrimination, acceleration, teacher supports, and parental options are discussed. Tensions raised by the two competing American values of equity and excellence are addressed. Five policies are recommended for fulfilling the nation's commitment to educating gifted students: (1) the development of multidimensional protocols for identification of gifted students; (2) the mandating of greater participation of minority students in programs for gifted students; (3) greater support for efforts to develop curricula for gifted students that are differentiated from the general curriculum; (4) development of evaluation procedures that focus on improved student performance on high-level tasks; and (5) more support services for teachers working with gifted students. (ERIC abstract).

Karnes, F. A., & Marquardt, R. (1997). *Know your legal rights in gifted education*. ERIC Digest E541. Reston, VA: ERIC Clearinghouse on Disabilities and Gifted Education.

Gifted preschool, elementary, and secondary school children have very limited protections under state and federal laws. By contrast, children and adults with disabilities have, under federal statute and in turn under state law accepting federal provisions, comprehensive protections in the following areas not yet applicable to the gifted: identification for screening and program admission or eligibility purposes, educational or other institutional and related services, employment policies and practices, architectural barriers in and about public buildings and transportation facilities, and other civil rights protections. Parents, educators, and other concerned adults involved with gifted children should know the legal framework in which the education and related services are set forth. This digest addresses concerns relating to the education of gifted children, including references for determining legal rights under state statutes; negotiation; mediation; due process; and use of the courts.

### **Practice-based References**

McCarthy, J., Cruz, J., & Ratcliff, N. (1999). *Early childhood teacher education licensure patterns and curriculum guidelines: A state by state analysis*. Washington, DC: Council for Professional Recognition. (ERIC Document Services No. ED441605)

This report presents two studies: the first examining state early childhood teacher education requirements; and the second examining state curriculum guidelines for early childhood education. In section 1, data for the study were collected from 50 states and the District of Columbia regarding their early childhood teacher education licensure. Twelve licensure patterns are identified, based on the age ranges of the children that a teacher candidate is prepared to teach. States' regulatory specifications are examined by content area, outcomes, competencies, performance standards, and program standards. Issues and policy implications are also discussed. Section 2 of the report gives an overview of state guidelines for the development and delivery of early childhood curricula. Presented in question-answer format, section 2 provides state-by-state information on how guidelines are written and organized, age/grade level requirements, application of guidelines to children in special education and gifted programs, inclusion of various subject areas, theoretical orientation for guideline development, links to developmentally appropriate practice, references to integrated curriculum, and inclusion of assessment information.

National Education Association. (1975). Code of ethics of the education profession. Retrieved March 28, 2005, from <http://www.nea.org/aboutnea/code.html>

Adopted by the Representative Assembly in 1975, these principles represent the commitment of educators to students and the profession.

## Standard 9: Professional and Ethical Practice

### GT9S5

**Improve practice through continuous research-supported professional development in gifted education and related fields.**

#### Research-based References

Archambault, F. X., Westberg, K. L., Brown, S. W., Hallmark, B. W., Emmons, C. L., & Zhang, W. (1993). *Regular classroom practices with gifted students: Results of a national survey of classroom teachers*. Research Monograph 93102. Storrs, CT: National Research Center on the Gifted and Talented.

The Classroom Practices Survey was conducted to determine the extent to which gifted and talented students receive differentiated education in regular classrooms. Survey samples were third and fourth grade teachers, including a general sample of teachers in public schools (n=3993); teachers in private schools (n=980); and four samples of teachers in public schools with high concentrations of African-American students (n=592), Asian-Americans (n=587), Hispanic-Americans (n=582), and Native Americans (n=580). Approximately 50 percent of teachers surveyed responded. The major finding was that third and fourth grade teachers in all settings make only minor modifications in the regular curriculum to meet the needs of gifted students. Teachers who make provisions for the gifted are likely to assign them advanced readings, independent projects, enrichment worksheets, and reports of various kinds. There were also few differences in regular classroom services between schools with and without formal gifted programs.

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.

Used a national probability sample of 1,027 mathematics and science teachers to provide a large-scale empirical comparison of effects of different characteristics of professional development on teachers' learning. Results identify three core features of professional development that have significant positive effects on teachers' self-reported increases in knowledge and skills and changes in classroom practice. Also identifies structures that affect teacher learning.

Gentry, M. L. (1999). *Promoting student achievement and exemplary classroom practices through cluster grouping: A research-based alternative to heterogeneous elementary classrooms*. (Report No. RM9918). Storrs, CT: National Research Center on the Gifted and Talented.

This monograph describes a causal-comparative, longitudinal study of cluster grouping at the elementary level to examine the effects of an existing cluster grouping program on the achievement and identification of students who participated in the program from third through fifth grade and to compare achievement with similar students who were not involved in a cluster grouping program. A secondary purpose was to investigate the practices of the teachers who taught in the school using cluster grouping to help provide insight into their classrooms and the school. Results included more students being identified as high achieving during the three program years, achievement scores increasing within the school using cluster grouping, and a significant interaction between the treatment and comparison school in favor of the treatment school. Qualitative findings indicated that teachers used flexible grouping, gifted education strategies, had high yet realistic expectations of their students, and were involved in gifted professional development.

Kimpston, R. D., & Rogers, K. B. (1988). Predispositions, participatory roles, and perceptions of teachers, principals, and community members in a collaborative curriculum planning process. *Journal of Curriculum Studies*, 20(4), 351-367.

Describes a two-year case study that focused on teacher, principal, and community involvement in curriculum planning in a large midwestern school district. Examines the participants' expectations, satisfactions, and attitudes toward curriculum planning, and the relationship of these variables to the

resulting process and product.

Westberg, K. L., Archambault, F. X., Dobyms, S. M., & Salvin, T. J. (1993). *An observational study of instructional and curricular practices used with gifted and talented students in regular classrooms*. Research Monograph 93104. Storrs, CT: National Research Center on the Gifted and Talented, Storrs, CT.

This report describes one part of the Classroom Practices Study, focusing on systematic observations of gifted and talented students in 46 third and fourth grade classrooms. The observations were designed to determine if and how teachers meet the needs of gifted and talented students in regular classroom settings. The Classroom Practices Record (CPR) instrument was developed to document the types of differentiated instruction that these students receive. Results indicated that little differentiation in the instructional and curricular practices, including grouping arrangements and verbal interactions, was provided for gifted and talented students in regular classrooms. Across 5 subject areas and 92 observation days, gifted students received instruction in homogeneous groups only 21 percent of the time, and the target gifted and talented or high ability students experienced no instructional or curricular differentiation in 84 percent of the instructional activities in which they participated.

### Literature/Theory-based References

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A review of British research on effective teaching of able students leads to a report on the Oxfordshire Effective Teachers of Able Pupils Project. This study found effective teachers shared similar beliefs about learning, had empathy with the needs of able children, created a secure classroom environment, held high expectations, used encouragement and praise, and stressed humor and fun.

Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.

This model uses five levels of evaluation to address the outcomes of professional development activities. Based on several research studies, Guskey and Sparks describe five levels arranged hierarchically from simple to more complex, with each level of evaluation tending to require increased time and resources: 1. participants' reactions, 2. participants' learning, 3. organization support and change, 4. participants' use of new knowledge and skills, and 5. student learning outcomes.

Harris, A. (1998). Effective teaching: A review of the literature. *School Leadership and Management*, 18(2), 169-183.

Reviews research on pedagogical, managerial, and organizational aspects of effective teaching, highlighting teaching effects, models, and artistry. Effective teaching depends highly on the nature of educational outcomes and goals; requires central qualities, skills, and behaviors; demands an extensive repertoire of teaching styles; and is linked to reflection, enquiry, and continuous professional development.

Rogers, K. B. (1989). Training teachers of the gifted: What do they need to know? *Roepers Review*, 11, 145-150.

A model for training teachers to deal effectively with gifted children is proposed. Three levels of training are delineated to meet the needs of the classroom teacher, the cluster/resource teacher of the gifted, and the gifted program administrator. Content and program design are outlined.

### Practice-based References

Callahan, C., Cooper, C., & Glascock, R. (2003). *Preparing teachers to develop and enhance talent: The position of national education organizations*. (ERIC Document Services No. ED477882)

This report discusses the place of preservice and inservice teacher education in the needs of gifted children, outlines the role of the gifted education specialist, and discusses the competencies that gifted education specialists should have. It begins by providing a joint statement of core beliefs and goals

related to giftedness and the preparation of educators by the Association for the Gifted of the Council for Exceptional Children and the National Association for Gifted Children. The authors advocate the need to prepare general education teachers for teaching gifted students and provide a list of competencies that pre-service teachers should gain during their preparation. They also emphasize the need for on-going staff development for all classroom teachers in gifted education.

Dorn, C. M., & Douglas, C. (1985). Differentiated staffing. *Gifted Child Today*, 40, 6-8.

A Saturday visual arts enrichment program employs a differentiated staffing pattern using a master teacher as mentor for both high school students and teacher trainees.

Gross, M. U. M. (2002). Musings: Gifts to the gifted--training our teachers. *Understanding Our Gifted*, 15(1), 25-27.

This article discusses teacher misconceptions of gifted students and gifted programs and the effects of a postgraduate teacher education program in Australia called the Certificate of Gifted Education. Results of the program indicate powerful changes in teachers' attitudes and support the need to provide every teacher with training in gifted education.

Torrance, E. P., Goff, K., & Satterfield, N. B. (1998). *Multicultural mentoring of the gifted and talented*. Waco, TX: Prufrock Press.

This guide offers guidance for mentoring programs and relationships serving gifted and/or talented students from multicultural and/or disadvantaged environments. After an introductory chapter that defines the mentor concept, Chapter 2 considers the mentoring relationship, racial/cultural differences, characteristics of economically disadvantaged children and their families, and examples of creative positives such children may exhibit. Chapter 3 examines mentoring factors, including obstacles to mentoring relationships, gender differences, and multicultural awareness, where chapter 4 considers learning strategies. Chapter 5 examines positives of mentoring for both mentors and those being mentored, and Chapter 6 discusses intergenerational mentoring relationships. The seventh chapter discusses the mentor's role as liaison between family and the school system and the eighth chapter offers guidelines for evaluation and feedback for creative ideas and products. Chapter 9 looks at ending the mentoring relationship and the last chapter gives examples and ideas for mentor programs.

## **Standard 9: Professional and Ethical Practice**

### **GT9S6**

**Participate in the activities of professional organizations related to gifted and talented education.**

#### **Practice-based References**

Callahan, C., Cooper, C., & Glascock, R. (2003). *Preparing teachers to develop and enhance talent: The position of national education organizations*. (ERIC Document Services No. ED477882).

This report discusses the place of preservice and inservice teacher education in the needs of gifted children, outlines the role of the gifted education specialist, and discusses the competencies that gifted education specialists should have. It begins by providing a joint statement of core beliefs and goals related to giftedness and the preparation of educators by the Association for the Gifted of the Council for Exceptional Children and the National Association for Gifted Children. A discussion follows that advocates the need to prepare general education teachers for teaching gifted students and provides a list of competencies that pre-service teachers should gain during their preparation. The report also emphasizes the need for on-going staff development for all classroom teachers in gifted education.

Council for Exceptional Children. (1994). *CEC policies for delivery of services to exceptional children*. Reston, VA: Author.

This compilation outlines the Council for Exceptional Children's basic commitments and responsibilities to exceptional children. The policies are intended to set the stage for emerging professional practices and procedures, providing a guideline for those who strive to provide quality education for exceptional learners. Professional policies are grouped according to the following general topics: (1) delivering an appropriate education; (2) coordinating responsibilities with government and community representatives; (3) responsibilities of the school administration; (4) school attendance; (5) creating an environment of support and accountability; (6) early childhood; (7) education of the gifted and talented; (8) managing communicable diseases and students with special health care needs; (9) community-based services; (10) testing; (11) ethnic and multicultural groups; and (12) career education and transition.

Landrum, M. S., Callahan, C. M., & Shaklee, B. D. (2000). *Aiming for excellence: Gifted program standards. Annotations to the NAGC pre-k-grade 12 gifted program standards*. Waco, TX: Prufrock Press.

This book is a guide to the standards for programs designed for gifted and talented students developed by the National Association for Gifted Students in 1998. The guide is intended to provide practical help to practitioners by including annotations that supply a rationale and further explanations for each standard. A standard statement, description, rationale, lists of benefits and potential barriers to implementation, and examples of meeting the standard at the minimum and exemplary levels are given for each standard. Individual chapters are: (1) "Program Design" (Beverly D. Shaklee); (2) "Program Administration and Management" (Mary S. Landrum and others); (3) "Socio-Emotional Guidance and Counseling" (Helen L. Nevitt); (4) "Student Identification" (Susan J. Hansford and others); (5) "Curriculum and Instruction" (Kimberley Chandler); (6) "Professional Development" (Mary S. Landrum); and (7) "Program Evaluation" (Carolyn M. Callahan). An appendix contains the Pre-K-Grade 12 Gifted Program Standards.

Riley, T. L., & Karnes, F. A. (1993). Joining together with other associations: Strategies for cooperation. *Roeper Review*, 15, 250-251.

This survey of 11 presidents of professional education associations and parent organizations in Mississippi found that all responded positively to the idea of including gifted education workshops and presentations in future conference programs. Strategies for working with organizations and associations interested in gaining information on the gifted are discussed.

Troxclair, D., & Karnes, F. (1997). Public relations: Advocating for gifted students. *Gifted Child Today*, 20(3), 38-41, 50.

A study of 29 educational organizations in Louisiana investigated public relations needs relative to the education of gifted children. Eighteen organizations indicated they would welcome gifted education presentations at their state conferences. The need for a statewide gifted advisory council to coordinate publications, speakers, and advocacy efforts is discussed.

## **Standard 9: Professional and Ethical Practice**

### **GT9S7**

**Reflect on personal practice to improve teaching and guide professional growth in gifted and talented education.**

#### **Research-based References**

Archambault, F. X., Westberg, K. L., Brown, S. W., Hallmark, B. W., Emmons, C. L., & Zhang, W. (1993). *Regular classroom practices with gifted students: Results of a national survey of classroom teachers*. (Research Monograph 93102). Storrs, CT: National Research Center on the Gifted and Talented.

The Classroom Practices Survey was conducted to determine the extent to which gifted and talented students receive differentiated education in regular classrooms. Survey samples were third and fourth grade teachers, including a general sample of teachers in public schools (n=3993); teachers in private schools (n=980); and four samples of teachers in public schools with high concentrations of African-American students (n=592), Asian-Americans (n=587), Hispanic-Americans (n=582), and Native

Americans (n=580). Approximately 50 percent of teachers surveyed responded. The major finding was that third and fourth grade teachers in all settings make only minor modifications in the regular curriculum to meet the needs of gifted students. Teachers who make provisions for the gifted are likely to assign them advanced readings, independent projects, enrichment worksheets, and reports of various kinds. There were also few differences in regular classroom services between schools with and without formal gifted programs.

Bain, S., Bourgeois, S., & Pappas, D. (2003). Linking theoretical models to actual practices: A survey of teachers in gifted education. *Roeper Review*, 25, 166-172.

This article reports results of a regional survey that focused on topics not typically covered in surveys of gifted programs. The teachers were familiar with program models and concepts but they could not identify the models and concepts underlying their programs. The evidence from this survey supports the need for training of gifted teachers that goes beyond a basic 30 hour overview.

Gubbins, E. J., Westberg, K. L., Reis, S. M., Dinnocenti, S. T., Tieso, C. L., & Muller, L. M., et al. (2002). *Implementing a professional development model using gifted education strategies with all students*. (Report RM02172). Storrs, CT: National Research Center on the Gifted and Talented.

This report presents findings of a 5-year study on using professional development to extend gifted education pedagogy to regular education programs. Findings indicate that professional development opportunities must respond to an identified need, apply knowledge and experiences, requires time for reflection, and should include observation of master teachers, collegial coaching, and demonstration of instructional practices.

Westberg, K. L., Archambault, F. X., Dobyms, S. M., & Salvin, T. J. (1993). *An observational study of instructional and curricular practices used with gifted and talented students in regular classrooms*. (Research Monograph 93104). Storrs, CT: National Research Center on the Gifted and Talented. This report describes one part of the Classroom Practices Study, focusing on systematic observations of gifted and talented students in 46 third and fourth grade classrooms. The observations were designed to determine if and how teachers meet the needs of gifted and talented students in regular classroom settings. The Classroom Practices Record (CPR) instrument was developed to document the types of differentiated instruction that these students receive. Results indicated that little differentiation in the instructional and curricular practices, including grouping arrangements and verbal interactions, was provided for gifted and talented students in regular classrooms. Across 5 subject areas and 92 observation days, gifted students received instruction in homogeneous groups only 21 percent of the time, and the target gifted and talented or high ability students experienced no instructional or curricular differentiation in 84 percent of the instructional activities in which they participated.

### Literature/Theory-based References

Guskey, T. (1998, April). *Teacher efficacy measurement and change*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA. (ERIC Document Reproduction Service No. ED422396).

Teacher efficacy is defined as teacher's belief or conviction that they can influence how well students learn (T. Guskey and P. Passaro, 1994). Efforts to clarify the definition of teacher efficacy are sometimes clouded by similar or related constructs. It is suggested that the only major difference between perceptions of efficacy and responsibility is in the tense of the items used in the measure, with efficacy representing projected potency and responsibility being an attribute directed toward the past. From the earliest research, teacher efficacy has been considered to have two dimensions, sometimes suggested to be outcome expectations and efficacy expectations. Others have interpreted the dimensions as personal efficacy and teaching efficacy. Guskey and Passaro (1994) have found the two dimensions to be: internal, the extent that teachers believe that they, and other teachers, have the influence and impact on student learning; and external, a dimension that measures teachers' perceptions of the influence and control of factors outside the classroom.

Harris, A. (1998). Effective teaching: A review of the literature. *School Leadership and Management*, 18(2), 169-183.

Reviews research on pedagogical, managerial, and organizational aspects of effective teaching, highlighting teaching effects, models, and artistry. Effective teaching depends highly on the nature of educational outcomes and goals; requires central qualities, skills, and behaviors; demands an extensive

repertoire of teaching styles; and is linked to reflection, enquiry, and continuous professional development.

Rogers, K. B. (1989). Training teachers of the gifted: What do they need to know? *Roeper Review*, 11, 145-150.

A model for training teachers to deal effectively with gifted children is proposed. Three levels of training are delineated to meet the needs of the classroom teacher, the cluster/resource teacher of the gifted, and the gifted program administrator. Content and program design are outlined.

### **Practice-based References**

Cassady, J., Neumeister, K., Adams, C., Cross, T., Dixon, F., & Pierce, R. (2004). The differentiated classroom observation scale. *Roeper Review*, 26, 139-146.

This article presents the Differentiated Classroom Observation Scale (DCOS) that was developed to examine the differentiated learning activities and experiences of gifted students in classrooms. The scale could be used for observation of gifted teachers or teachers might use it for personal growth and peer review and reflection on the quality of their interventions for the gifted.

Gentry, M., & Keility, B. (2004). Rural and suburban cluster grouping: Reflections on staff development as a component of program success. *Roeper Review*, 26, 147-155.

This article examines parallel cluster grouping programs in two different school districts and the nature of the staff development that was delivered when the programs were initially implemented. After reviewing staff development records in schools, the authors put forward a plan for effectively offering GT staff development. A set of five steps is outlined in this article.

Gross, M. U. M. (2002). Musings: Gifts to the gifted--training our teachers. *Understanding Our Gifted*, 15(1), 25-27.

This article discusses teacher misconceptions of gifted students and gifted programs and the effects of a postgraduate teacher education program in Australia called the Certificate of Gifted Education. Results of the program indicate powerful changes in teachers' attitudes and support the need to provide every teacher with training in gifted education.

## Standard 10: Collaboration

Educators of the gifted effectively collaborate with families, other educators, and related service providers. This collaboration enhances comprehensive articulated program options across educational levels and engagement of individuals with gifts and talents in meaningful learning activities and interactions. Moreover, educators of the gifted embrace their special role as advocate for individuals with gifts and talents. They promote and advocate for the learning and well being of individuals with gifts and talents across settings and diverse learning experiences.

### GT10K1

**Culturally responsive behaviors that promote effective communication and collaboration with individuals with gifts and talents, their families, school personnel, and community members.**

#### Research-based References

Borland, J. H., Schnur, R., & Wright, L. (2000). Economically disadvantaged students in a school for the academically gifted: A postpositivist inquiry into individual and family adjustment. *Gifted Child Quarterly*, 44, 13-32.

This follow-up study reports the effects of the placement in a school for gifted students of five economically disadvantaged minority students from central Harlem who were identified in kindergarten as potentially academically gifted. A research team collected grade two follow up data from classroom observations, student focus groups, sociograms, test and questionnaire data, and interviews with students, parents and teachers. The authors concluded that the students made better academic progress than could have been expected, were integrated socially, and appeared to be experiencing no adverse emotional reaction. The authors believe that their success was dependent upon the students, the families, and the school setting. They also assert that the identification of economically disadvantaged students as potentially gifted is valid.

Diaz, E. I. (1998). Perceived factors influencing the academic underachievement of talented students of Puerto Rican descent. *Gifted Child Quarterly* 42, 105-122.

This qualitative investigation explored the self and environmental perceptions of six talented students of Puerto Rican descent who were underachieving in an urban high school in the northeastern section of the United States. Four factors were identified as influencing underachievement: family (strained relationships, unhappy home, inappropriate parental expectations, minimal academic guidance, inconsistency), school (inappropriate early curricula experiences, non-inspiring teachers, unrewarding curriculum, questionable counseling), community (hostile environment, gangs, prejudice, few constructive entertainment options), and personal (insufficient perseverance, low self efficacy, inappropriate coping strategies). The absence of early appropriate academic experiences appeared to be a major factor in the students' future success.

Fernández, A. T., Gay, L. R., Lucky, L F., Gavilan, M. R. (1998). Teacher perceptions of gifted Hispanic limited English proficient students. *Journal for the Education of the Gifted*, 21, 335-351.

This study examined the relationship between teachers' ethnicities and the way they rated characteristics for gifted Hispanic LEP students and any gifted student. Of 373 teachers who participated, 162 were Hispanic, 137 were White, and 74 were African American. Using the Survey on Characteristics of Gifted and Talented Hispanic Students (Marquez et al., 1992) and an adapted form that removed all of the characteristics that related specifically to Hispanic students, the researcher found similarities and differences in teacher perceptions. Teachers perceived the characteristics "is curious" as important across both groups but rated "has a large vocabulary" and expresses himself/herself well orally" differently for the two groups. While teachers do not view artistic, musical, and kinesthetic abilities as important characteristics of giftedness, they view these more favorably for gifted Hispanic LEP students. The authors conclude that teachers tend to perceive language abilities as important characteristics of

giftedness which may have negative implications for gifted Hispanic LEP students.

Harmon, D. (2002). They won't teach me: The voices of gifted African American inner-city students. *Roeper Review*, 24, 68-75.

This study examined the effects of bussing from a lower income, predominantly minority, elementary school to a middle to upper income, predominantly majority elementary school. African American students who were bussed were asked questions about their relationships with their classmates, their classroom environment, and their relationships with their teacher. Students were angry about attending another school and receiving harassment and were rejected by their white peers. They mostly stayed with their own minority group. On the contrary, they felt more comfortable and did not experience the harassment in their other school. They viewed ineffective teachers (i. e., those who won't teach them) as having low expectations, lacking an understanding and providing unfair and unequal treatment. On the other hand, effective teachers had high expectations, understood the culture, and provided fair and equal treatment. Three of the effective teachers were interviewed and spent considerable time developing activities and lessons that presented knowledge from multiple perspectives, required respect in their classrooms and provided community role models.

Kitano, M. (1997). Gifted African American women. *Journal for the Education of the Gifted*, 21, 254-287.

This study explored the personal, socialization, and structural factors affecting the life-span achievement of 15 gifted African American women, ages 31 to 59 years. The primary data-collection method for this study was an in-person, semi-structured interview with each subject and a telephone interview with a parent or other person familiar with the subject's life. Results indicated that these gifted women displayed high achievement during the K-12 years and were supported by their schools and families. All reported racism as significant challenges in adulthood. In response to racism, sexism, poverty, parental death, and other obstacles, the participants manifested positive coping strategies such as ignoring, reframing, affirming oneself, finding alternative paths, and seeking support from the environment. The author recommends that the number of African American teachers need to be increased, that all teachers must support African American girls' self-confidence and self-esteem, that educators and families must collaborate to help these women recognize hardships, that the schools must provide guidance, and that society should work to recognize and remove social and institutional obstacles.

Plata, M., & Masten, W. (1998). Teacher ratings of Hispanic and Anglo students on a behavior rating scale. *Roeper Review*, 21, 139-144.

This study examined the 12 teachers' nomination rates of Hispanic and Anglo students to gifted and talented programs using the Scales for Rating Behavior Characteristics of Superior Students. Results indicated that ethnicity was a factor in teachers' nomination rate with Anglos receiving higher ratings across all scales. Hispanic females were nominated fewer times than any other group.

Scott, M. S., Deuel, L. S., Jean-Francois, B. & Urbano, R. C. (1996). Identifying cognitively gifted ethnic minority children. *Gifted Child Quarterly*, 40, 147-153.

A survey was sent to White, Hispanic and Black parents of children in the gifted and talented program of a large urban school district. The results indicated that there were few differences among the three parent groups in the attributes that they believed were current descriptors of their gifted child. Common descriptors included "seeks information," "learns quickly," "school performance," "reading," "performs above peers," "general memory," "interest in learning," "problem solving," "communication skills," and "is aware of environment." However, more White families requested an evaluation of their child for possible placement in the gifted and talented program. The authors conclude that less referral among minority groups may result in fewer students in the gifted program.

Thorne, Y. M. (1995). Achievement motivation in high achieving Latina women. *Roeper Review*, 18, 44-49.

Sixty-three Latina women (43 doctoral graduates, 20 completers of doctoral courses) were selected for this investigation that examined achievement motivation. These women were found to be intrinsically and extrinsically motivated with various internal and external psychosocial factors. Intrinsic motives of mastery, work competitiveness, and personal unconcern were associated with successful achievement.

The extrinsic motive of generativity was related to achievements in Latino and professional communities. The Latina women in this sample were less sex-role traditional in their attitudes across achievement settings. On the other hand, they demonstrated greater sex-role traditional behaviors in their homes. Professionals need to recognize the importance of family and institutional supports in meeting the goals of these women.

### Literature/Theory-based References

Ford, D. Y., Grantham, T. C., & Harris III, J. J. (1996). Multicultural gifted education: A wake up call to the profession. *Roeper Review*, 19, 72-79.

The authors encourage professionals in gifted education to give attention to multicultural education. They recommend that teachers be trained to be more culturally aware and competent; that they be aware of their own biases, assumptions, and stereotypes; that they understand the world view from different cultures; that they try to create awareness and understanding among all students; and that they deliver more effective education to minority students.

Kitano, M. K., & Espinosa, R. (1995). Language diversity and giftedness: Working with gifted English language learners. *Journal for the Education of the Gifted*, 18, 234-254.

This article summarizes research on language diversity and giftedness, recommending these new strategies for identification: a developmental program that “evokes” a gifted student’s potential; a broader conceptualization of intelligence; alternative constructs of giftedness; and assessment models developed for specific populations. In addition, English language learners tend to profit from primary language instruction during the early grades followed by a two-way bilingual program for upper level elementary gifted students. Recommended instructional strategies include student-centered approaches, emphasis on language development, valuing of students’ languages in strong content courses, and collaborative learning. Family and community involvement must recognize cultural strengths and respect family resources.

Kolesinski, M. T., & Leroux, J. A. (1992). The bilingual education experience, French-English, Spanish-English: From a perspective of gifted students. *Roeper Review*, 14, 221-224.

This article compares how French-English gifted students and Spanish-English gifted students are selected and educated in Ontario, Canada and Southern Texas. The primary difference is that the goal for French-English gifted students is developing French proficiency at the expense of relevant programming while for the Spanish-English gifted student, the goal is to develop English proficiency at the expense of the native language. Teachers need to be recruited who are fluent in two languages, are trained to use flexible teaching alternatives, and use differentiated curriculum within the framework of a respected culture.

Ogbu, J. U. (1994). Understanding cultural diversity and learning. *Journal for the Education of the Gifted*, 17, 355-383.

This article argues that core curriculum and multicultural education do not adequately address the problem of minority groups who have not traditionally done well in the public school. The crucial issue in cultural diversity and learning is the degree of diversity between the minority cultures and the American mainstream culture. Involuntary minority students, those who were previously oppressed by the mainstream culture, may resist academic success because of their fear of “acting White” rather than “acting Chicano,” and so on. The author recommends that students be taught attitudes and behaviors that lead to academic success apart from attitudes and behaviors that lead to a loss of ethnic identity. Their families need to value academic success as much as achievement in sports and entertainment and encourage their children to accept responsibility for their own learning,

### Practice-based References

Ford, D. Y., & Grantham, T. C. (2003). Parenting gifted culturally diverse children: Focus on education-related issues and needs. *Understanding our Gifted*, 15(4), 12-17.

After reviewing the needs of culturally diverse gifted students, the following recommendations are made:

seek gifted programs that meet the dual needs of students who are gifted and diverse; encourage the hiring of culturally diverse teachers; expose children to diverse gifted mentors, and encourage school personnel to use multicultural materials.

Grantham, T., & Ford, D. (1998). A case study of the social needs of Danisha: An underachieving gifted African-American female. *Roeper Review*, 21, 96-101.

This case study of a 15-year-old underachieving gifted African-American female was conducted to identify social and emotional needs of gifted students. Data were collected through interviews, field observations, and school data. The authors found that Danisha struggled to accept Caucasian students' social norms and felt isolated in her gifted and talented classes. She wanted to integrate into the gifted classes, yet she didn't want to forfeit her relations with her African-American friends. They suggested that counseling needed to focus on issues related to racial identity; teachers needed multicultural training; and coordinators needed to identify more minority students in classes.

Hébert, T. P. (1998). Gifted Black males in an urban high school: Factors that influence achievement and underachievement. *Journal for the Education of the Gifted*, 21, 385-414.

The case studies reported in this article describe the experiences of two gifted African American males in an urban high school. Factors that influenced achievement appeared to be belief in self, family support, multicultural appreciation, sensitivity, and high aspirations. Factors that influenced underachievement appeared to be an inappropriate match with the curricular activities and learning style, inappropriate counseling and class placement, inconsistent family role models. The authors suggest the importance of training counselors for diversity, working closely with families, and providing enrichment activities outside the school days.

Miller, A. K. (1997). Creating an international learning community. *Gifted Child Today*, 20(3), 15, 17.

Describes the international art education program in The Art Center of Waco, Texas. The benefits for gifted artists in learning about the art of other cultures and experimenting with different art forms are discussed, and the role parents play in developing an international learning community is highlighted.

Reyes, E., Fletcher, R., & Paez, D. (1996). Developing local multidimensional screening procedures for identifying giftedness among Mexican American border population. *Roeper Review*, 18, 208-211.

This article reports the results of screening procedures at two rural elementary schools located on the new Mexico-Texas-Mexico border. The ethnic composition of this school is 97% Hispanic, 2% white, non-Hispanic, and less than .5% African American. The identification process included training of local personnel that is designed for the particular community, a multidimensional screening that included student portfolios, the Torrance Test of Creative Thinking, the Matrix Analogies Test, student self-identification, and teacher, parent, and community inventories.

## Standard 10: Collaboration

### GT10S1

#### Respond to concerns of families of individuals with gifts and talents.

##### Research-based References

Hertzog, N., & Bennett, T. (2004). In whose eyes? Parents' perspectives on the learning needs of their gifted children. *Roeper Review*, 26, 96-104

This paper focuses on the results of surveys of 280 families from two neighboring school districts regarding how they perceived the needs of their children identified as gifted. Parents reported more needs for their children than were being addressed by the school, especially intellectual and creative stimulation. Parents were more likely to seek help outside of school, from libraries, other families, and religious program. They did not often seek psychological or counseling help from the schools.

Karnes, F. A., & D'Ilio, V. R. (1989). Student leaders' and their parents' perceptions of the home environment. *Gifted Child Quarterly*, 33, 165-168.

This study investigated the perceptions of the home environment among students nominated by their schools and enrolled in a leadership training program and those of their parents. The sample included 76 students in grades 6 to 11 who were attending the Leadership Studies Program at the University of Southern Mississippi and their parents (55 mothers and 46 fathers). The Family Environment Scale was administered to all of the parents and their children. Significant differences were found between children and their mother and/or father on "expressiveness" and on "intellectual-cultural orientation" and with mothers on "independence." The authors conclude that the parents should create a home in which these differences are minimized so that leadership can be nurtured at home and at school.

Louis, B., & Lewis, M. (1992). Parental beliefs about giftedness in young children and their relation to actual ability level. *Gifted Child Quarterly*, 36, 27-31.

The sample for this study was 118 parents and their children who contacted a Gifted Child Clinic. In describing their children, parents identified 26 different characteristics with language, memory, and abstract thinking most frequently cited. The authors found that parents were good judges of the gifted status of their preschool children with 61% of their children having intelligence scores of 132 or above and the remainder having above average ability (IQ=118).

Moon, S. M. (1995). The effects of an enrichment program on the families of participants: A multiple-case study. *Gifted Child Quarterly*, 39, 198-208.

Ten families of high school seniors who had participated in the Purdue Three Stage Model program for at least three years in elementary school participated in this study. The researcher interviewed each of the families regarding the various effects of the program. Moon also used supplementary data sources including student identification information, progress reports, special accomplishments, previously completed questionnaires, and future plans. She discovered four general categories of effects: the family shared many of the enrichment program activities; the structure (communication, perceptions, relationships) of the family changed; linked the family to the school; and reinforced existing talents.

Olszewski-Kubilius, P., & Lee, S. (2004). Parent perceptions of effects of the Saturday Enrichment Program on gifted students' talent development. *Roeper Review*, 26, 156-165.

This study looked at survey responses from 187 parents of students who attended the Saturday Enrichment Program (SEP) at the Center for Talent Development (CTD) at Northwestern University. The study showed that overall, parents perceived favorable effects of the program on their child's talent development, especially academic talent development. Favorable results as a result of the program included: parents perceived that their children gained scholastic skills or knowledge, were more motivated to learn, and gained academic competence; parents had higher academic expectations for their children;

and SEP classes provided children with both challenge and enjoyment. Results also showed that the majority of parents were still reluctant to pursue additional educational actions inside or outside of school for their children. However, out of those who contacted their local schools almost half said that their children received more challenging work as a result.

Pletan, M. D., Robinson, N. M., Berninger, V. W., & Abbot, R. D. (1995). Parents' observations of kindergartners who are advanced in mathematical reasoning. *Journal for the Education of the Gifted, 19*, 30-44.

This study examined two major questions: What behaviors and abilities do young, mathematically precocious children display? Are parents able to recognize such precocity? The researchers mailed a questionnaire to 120 parents of gifted kindergarten children. The sample was primarily Caucasian (77%), with Asians constituting 13%, African Americans (6%), and other groups (4%). The parents frequently mentioned adding, subtracting, and multiplying; counting; interest in money, computer games, board games, and telling time; making up story problems; reading road signs; and using arithmetic workbooks. Five factors were found to characterize the parents' responses: (a) general intellectual factor, (b) short- and long-term memory, (c) rote memory, (d) spatial reasoning, and (e) specific relationship knowledge. They concluded that parents can indeed identify advanced abilities in mathematics.

Robinson, N. M., Weinberg, R. A., Redden, D., Ramey, S. L., & Ramey, C. T. (1998). Family factors associated with high academic competence among former head start children. *Gifted Child Quarterly, 42*, 148-156.

This study drew a sample of 154 children with the highest achievement (top 3%) from a 5,142 National Head Start/Public School Early Childhood Transition Demonstration Project. At the end of the first grade, data were collected through interviews with parents, and tests, inventories and questionnaires. In comparing this sample to the remainder of Head Start participants, the researchers reported that the parents of the high achieving children were more responsive and flexible in their parenting practices and able to communicate the importance of school to their children. Teachers report slightly greater involvement of these parents in school. Both parents and teachers rated the social behavior of these children more positively than the comparison group in the areas of assertiveness and self-control.

Scott, M. S., Deuel, L. S., Jean-Francois, B. & Urbano, R. C. (1996). Identifying cognitively gifted ethnic minority children. *Gifted Child Quarterly, 40*, 147-153.

A survey was sent to White, Hispanic and Black parents of children in the gifted and talented program of a large urban school district. The results indicated that there were few differences among the three parent groups in the attributes that they believed were current descriptors of their gifted child. Common descriptors included "seeks information," "learns quickly," "school performance," "reading," "performs above peers," "general memory," "interest in learning," "problem solving," "communication skills," and "is aware of environment." However, more White families requested an evaluation of their child for possible placement in the gifted and talented program. The authors conclude that less referral among minority groups may result in fewer students in the gifted program.

### **Literature/Theory-based References**

Pearl, P. (1997). Why some parent education programs for parents of gifted children succeed and others do not. *Early Child Development and Care, 130*, 41-48.

Examines four categories of variables influencing the effectiveness of parent education programs for parents of gifted children: (1) content relevancy; (2) teaching techniques; (3) teacher characteristics; and (4) practical considerations. Makes specific suggestions to improve program effectiveness. Maintains that program planning should address each area to improve program effectiveness.

Rash, P. K. (1998). Meeting parents' needs. *Gifted Child Today, 21*(5), 14-17.

Reviews information that teachers can impart to parents to assist them in parenting gifted children. Subjects addressed include characteristics of gifted learners, the need for early identification, school options, advocacy, myths about gifted students, the charge of elitism, the need to organize parent

associations, burnout, and resources.

Silverman, L. K. (2000). *Counseling the gifted and talented*. Denver, CO: Love.

In this book the author examines both the cognitive complexity and emotional intensity of gifted children and discusses the need for modification of counseling techniques. Presented is a developmental model to enable counselors to orchestrate a program of prevention rather than remediation. Specific strategies for individual and group counseling are provided. This book is also useful for parents who want to understand their gifted child's social and emotional needs.

Stephens, K. R. (1999). Parents of the gifted and talented: The forgotten partner. *Gifted Child Today*, 22(5), 38-43, 52.

Discusses how educators can provide parents of gifted students with the skills, knowledge, and assistance necessary to nurture their children's social, emotional, and intellectual development. Strategies include developing parent workshops, encouraging parent participation, and providing preservice teachers with coursework that focuses on effective communication and collaboration with parents.

### Practice-based References

Matthews, D., & Menna, R. (2003). Solving problems together: Parent/school/community collaboration at a time of educational and social change. *Education Canada*, 43(1), 20-23.

Research on teaching and learning emphasizes the need for school-family partnerships, student engagement, opportunities for relevant and authentic learning, and community involvement in the learning process. The case of a gifted but bored "problem student" shows how a school counselor encouraged collaborative problem solving among teachers, parents, and the student himself that drew on community-based learning opportunities.

Olenchak, F. R. (1998). *They say my kid's gifted – Now what? Ideas for parents for understanding and working with schools*. Waco, TX: Prufrock Press.

Developed by the National Association for Gifted Children, this book shows parents how to become informed, effective partners when working with schools. This handbook offers a jargon-free introduction to working with schools to help ensure a quality education experience for gifted kids, from understanding identification procedures and choosing a teacher, to ensuring a child's success with a gifted program and curriculum. This resource also includes a discussion of gifted education in the regular classroom setting and a special section devoted to solutions for "when all else fails." *They Say My Kid's Gifted: Now What?* also includes an extensive listing of state and national resources.

Riley, T. L. (1999). Put on your dancing shoes! Choreographing positive partnerships with parents of gifted children. *Gifted Child Today*, 22(4) 50-53.

Uses the analogy of dance to discuss development of positive relationships between teachers and parents of gifted children. Emphasis is on providing parents with necessary information, overcoming barriers to true partnerships, and rules of thumb for implementing the partnership on an ongoing basis, such as following the golden rule in communication and remaining positive.

Solow, R. (2003). What parents want: In their own words. *Understanding our Gifted*, 15(4), 3-7.

In this article, parents of gifted children describe the issues that matter most to them. Parents want professional co-advocates to help them be heard; regular, clear, and open communication to promote understanding; and administrative help navigating the school system so that expressed need will be translated into identifiable improvements.

Strip, C. & Hirsch, G. (2001). Trust and teamwork: The parent-teacher partnership for helping the gifted child. *Gifted Child Today*, 24(2), 26-30, 64.

This article discusses the need for teachers and parents to work together to help gifted students. It lists

10 principles for the identification and recognition of giftedness that parents and teachers should adhere to, including learning as much as possible about characteristics and needs of gifted children.

Yahnke Walker, S. (2002). *Survival guide for parents of gifted kids*. Waco, TX: Prufrock.

The guide addresses the topics of giftedness, gifted education, problems faced by gifted kids, personality traits, encouraging children both in and out of the home, and more. This book is aimed at parents interested in learning about their child's giftedness and teachers seeking an interesting, easy-to-read resource for educating parents.

## Standard 10: Collaboration

### GT10S2

**Collaborate with stakeholders outside the school setting who serve individuals with exceptional learning needs and their families.**

#### Research-based References

Davalos, R., & Haensly, P. (1997). After the dust has settled: Youth reflect on their high school mentored research experience. *Roeper Review*, 19, 204-207.

This study focused on the effects of a high school student independent study/mentorship class. Students were able to explore an area of special interest through a yearlong investigation of a research topic, guided by a community volunteer mentor with expertise in that particular field and a teacher for the gifted and talented. They also attended class as a group with their GT instructors. Each spring the high school students prepared presentations to report the results of their research to audiences with common interests. To determine the long-term benefits of the program, a questionnaire was mailed to 354 former GT student-participants during the years 1989-1994. Ninety students responded. While the sample was biased, students most often agreed or strongly agreed with the survey items. The students reported that the mentorship program was memorable; affected extracurricular activities and accomplishments; contributed to overall academic achievements; helped them select a particular vocation or career and enhance personal growth and development.

Hébert, T. P. (1998a). DeShea's dream deferred: A case study of a talented urban artist. *Journal for the Education of the Gifted*, 22, 56-79.

The author studied DeShea, a male African American high school student, using classroom observations, field notes; individual interviews with DeShea, his former art teacher, current high school teachers, and guidance counselor; and a document review of his school records. Although his achievement test scores indicated superior ability, he was failing English, US History, and chemistry. All of these courses were general track classes. Results indicated that these factors contributed to his poor performance: a mismatch between his high school art teacher's approach and his learning style, inappropriate counseling, serious personal problems at home, and his connection to other underachieving students. The author suggests having mentors from the community work with students, supporting parents in advocating for their children, and educating counselors about gifted and talented students.

Melber, L. M. (2003). Partnerships in science learning: Museum outreach and elementary gifted education. *Gifted Child Quarterly*, 47, 251-258.

This study examined a museum program and its effects on high achieving fourth and fifth graders. The museum program consisted of eight school-based sessions, held twice weekly, that allowed students to participate in activities that were similar to the scientific processes employed by museum scientists and incorporated actual museum specimens and artifacts. On the ninth session occurred in the museum where students met the scientists and visited areas normally closed to the public. Pre- and post questionnaires indicated that students were more interested in being a scientist, had less stereotyped ideas about a scientist's work, and gained content knowledge, particularly in areas that involved hands-on

activities with insects and arthropods.

Miserandino, A. D., Subotnik, R. F., & Ou, K. (1995). Identifying and nurturing mathematical talent in urban school settings. *The Journal for Secondary Gifted Education, 6*, 245-257.

This article is a summary of the results of a three-year Javits grant by the U. S. Department of Education that was designed to identify and nurture science and mathematical talent. Forty-five participants from an inner city high school, a heterogeneous magnet school, a laboratory high school and an elementary school for the gifted were involved in the study. Together with their teacher-mentors, the students spent 10 six-hour days studying and exploring advanced mathematical concepts in number theory, fractals, and probability by way of workshops offered by Hunter college mathematics professors and by teacher-mentors. Students also visited metropolitan area exhibits on mathematics-related topic. Results indicated that students increased confidence in their mathematical skills and selected more advanced mathematics courses in their high schools. The presence of a mentor proved to be a critical factor in motivating students to take advanced courses.

Reilly, J. M., & Welch, D. B. (1994/1995). Mentoring gifted young women. *The Journal for Secondary Gifted Education, 6*, 120-128.

The Mentor Connection is a community-based learning experience for 11th and 12th grade girls enrolled in suburban high schools in the Minneapolis-St. Paul area. Students who participate complete an application and must show evidence of perseverance, ability, creativity, and have an identified area of study. This study reported the reactions of 162 former students to their mentoring experience. The participants reported these effects: the identification of a career; more confidence in their professional and personal abilities; an increase in ability to interact with other professionals; an understanding of the importance of networks; a relationship to their current career choice; and an overall enthusiasm for the high school experience.

Terry, A. W. (2003). Effects of service learning on young, gifted adolescents and their community. *Gifted Child Quarterly, 47*, 295-308.

The purpose of this study was to explore the experiences of gifted adolescents who were involved in a service learning project in Georgia. Using a qualitative design, six students were chosen for individual interviews. In addition to these interviews, the researcher also conducted interviews with parents of three of the students, the principal and two community members. Observations of classes and documents were also collected for data analysis. The teacher who coordinated the project structured each class around the cognitive apprenticeship model (i.e., scaffolding, modeling, coaching, and fading) and incorporated the creative problem solving process and reflections. The participating students reported feeling more empowered to make decisions. They learned more about their community and became committed to projects outside the school campus.

Wade, R. C., & Putnam, K. (1995). Tomorrow's leaders? Gifted students' opinions of leadership and service activities. *Roeper Review, 18*, 150-151.

The sample in this study included 145 high school sophomores and juniors who attended a summer program at the Connie Belin National Center for Gifted Education at the University of Iowa. These students completed a questionnaire about their feelings toward student council and community service. Overall 81 students mentioned a positive benefit of student council activities while 61 cited at least one problem and 14 students were neutral. Students had more positive (99) than negative comments (41) to make about community service. Two themes emerged from their comments: Students want to make a difference in their schools and communities, and students want to have a choice about how and when to serve in their communities.

Wilson, V., Litle, J., Coleman, M. R., & Gallagher, J. (1997/1998). Distance learning: One school's experience on the information highway. *Journal for Secondary Gifted Education, 9*, 89-100.

This study examined the effects of the distance learning experiences that were connected to the North Carolina School of Science and Mathematics. The authors used questionnaires, surveys, interviews, focus groups, observations, document reviews, and student products to examine the effects of the program. They found that the students who participated in distance learning activities felt that they had

access to outstanding faculty, opportunities to take courses that were not previously available to them, the chance to interact with students from other schools, an opportunity to test their “metal” against prestigious courses, a chance to develop independent skills and study skills, and an opportunity to hone their communication and thinking skills. Disadvantages noted related to technical difficulties, personal time with the instructor, and the immediacy of feedback.

### Literature/Theory-based References

Feldhusen, J. F., & Kennedy, D. M. (1988). Preparing gifted youth for leadership roles in a rapidly changing society. *Roeper Review*, 10, 226-230.

This article described five components of a leadership education: (a) experience in predicting, planning and extrapolating; (b) explicit leadership training; (c) thinking skills; (d) experience in problem finding and problem solving; and the (e) study of major concepts, themes, issues, and ideas. Along with leadership education, the authors emphasize the need for a comprehensive program that included a study of foreign languages; mentoring experiences with leaders; early mastery of knowledge in the major disciplines; experience in goal setting, formulating objectives, and planning; the examination of values, ethical principles and philosophical systems; and early identification of special talents.

Limburg-Weber, L. (1999/2000). Send them packing: Study abroad as an option for gifted students. *The Journal of Secondary Gifted Education*, 11, 43-51.

The Council on Standards for International Educational Travel estimates that over 80,000 secondary students from 118 different countries study abroad. This article examines the possible benefits and practical issues related to this experience. Students appear to benefit by being more aware of the world, improving their foreign language, and broadening their perspectives on families, schools, and communities. As one student reflected, “...I became much more interested in politics, international affairs, and the rest of the world” (p.45). The author provides practical information to students and their parents who may be considering study abroad programs.

### Practice-based References

Ambrose, D., Allen, J., & Huntley, S. (1994). Mentorship of the highly creative. *Roeper Review*, 17, 131-134.

This is a retrospective case study that investigated the experiences of a highly gifted young artist and his relationship with three mentors who guided his development throughout his high school years. The mentors assisted their protégé in becoming more aware of and appreciating their cognitive strengths, supporting his talent emotionally, and in defining the nature of his life’s work. His experience shows that it is important that mentors provide emotional support and encouragement and inspirations about a topic of study.

Myers, W. A. (1993/1994). Two plus two does not always equal four (years). *The Journal for Secondary Gifted Education*, 5(2), 27-30.

This article provides a guide to dual-enrollment and early college entrance from the perspective of a student who actually participated in such courses. He discusses the preparation course that is required for all students who are planning to dual-enroll in college and high school; the college admission process; and an honors college course. This student felt that dual enrollment was the best path for him and provided a way of continuing his extracurricular activities in high school while at the same time pursuing more challenging work at the university level.

Terry, A. W. (2000). An early glimpse: Service learning from an adolescent perspective. *The Journal of Secondary Gifted Education*, 11, 115-135.

The purpose of this study was to examine the effects of service learning on three students who participated in Community Action Projects. The projects related to restoration of historical buildings and the development of a solid waste management plan. The author identified five themes from their case studies. First, they learned a method for involving themselves in service learning. Next, they learned that a positive attitude was important. Third, they learned how to work with people and cooperation. Fourth, they learned commitment through engagement in the community. Finally, they became empowered—

"kids can make a difference!"

## Standard 10: Collaboration

### GT10S3

**Advocate for the benefit of individuals with gifts and talents and their families.**

#### Research-based References

Kennedy, D. M. (2003). Custer, South Dakota: "Gifted's" last stand. *Gifted Child Quarterly*, 47, 82-93.

A study investigated advocacy factors that were influential in enabling a rural school district to expand its gifted program despite greatly diminished state support and a local budget crisis. Parents played a vital role, and relationships between a parent support group, the program coordinator, and the superintendent were also important.

Landrum, M., Katsiyannis, A., & DeWaard, J. (1998). A national survey of current legislative and policy trends in gifted education: Life after the national excellence report. *Journal for the Education of the Gifted*, 21, 352-371.

Purpose was to examine the nature and availability of state legislative and policy provisions for gifted students and to identify general state efforts to address the seven initiatives articulated by the *National Excellence Report*. Surveys, which included both open-ended and forced-choice items, were mailed to education departments in all 50 states. Responses were received from 42 states. Findings indicated that progress has been made toward some of the seven initiatives, while little or no change has occurred for others. Specifically, progress was limited to the areas of teacher preparation, enhanced curricular standards for gifted learners, and efforts to match world standards. Twenty-five states indicated that they had certification in gifted education with 23 indicating that they had more complex content and higher performance standards for gifted students. Further findings indicated some limited efforts toward serving early childhood gifted students, expanding the inclusion of disadvantaged and minority students, and broadening the definition of giftedness.

Larsen, M. D., Griffin, N. S., & Larsen, L. M. (1994). Public opinion regarding support for special programs for gifted children. *Journal for the Education of the Gifted*, 17, 131-142.

This study examined the debate regarding the devotion of resources and development of services to gifted and talented students in the public school system. The purpose of this survey was to inform policy makers at local, state, and national levels about the opinions of the general American society. The Gallup Organization conducted a telephone survey of 1,000 adults: 844 were parents of school-aged children and 297 were parents of children identified as gifted and talented. Surveyors reported that the public supported gifted programs, especially when the quality of regular classroom education is not reduced. One-sixth of those surveyed supported allocating more funding for special programs for gifted students. However, in general, there was more support for "doing more" than "spending more," with over 60% wanting the schools to do more for gifted and talented programs. The authors conclude that the results should encourage local and state legislation to differentiate more for all students.

Robinson, A., & Moon, S. M. (2003). A national study of local and state advocacy in gifted education. *Gifted Child Quarterly*, 47(1), 8-25.

A study examined 61 examples of advocacy from 34 states and selected six sites for case studies. Factors that supported positive outcomes include advocates who are persistent, knowledgeable about both best practices in gifted education and local state political processes, and more often collaborative than adversarial.

Todd, S. M., & Larson, A. (1992). In what ways might statewide advocates for gifted and talented education coordinate and focus their efforts? *Gifted Child Quarterly*, 36, 160-164.

This article examined the state of Utah and its development of a statewide advocacy design that provided universal coordination, organization, focus, and direction on behalf of gifted and talented students. A step-by-step process is included demonstrating the Utah Association for Gifted Children's use of the creative problem-solving process in order to foster advocacy for the gifted and talented in formulating goals and missions. The authors conclude that the impact of this coordinated advocacy effort was immediately noticed through improvement in services for gifted children, better in-service training for educators, and more focused policy at the state level. This example of creative collaboration strategies may be useful to other states in meeting their own advocacy affairs.

### Literature/Theory-based References

Alvino, J. (1991). Media relations: What every advocate should know about the tricks of the trade. *Gifted Child Quarterly*, 35, 204-209.

This article examines how the use of media technology can enhance advocacy efforts for gifted education and programs. Alvino provides three rules for public relations: make an inside contact and maintain it; learn what is newsworthy; and learn the distinction between form and content. The author provides insightful information, helpful tips, and strategies for using different media forms: news releases, features, magazines, journals, newsletters, radio, television, and news conferences. Alvino also introduces his Driver-Rider Matrix as a strategy for enhancing the image of an organization. "Piggyback on the reputation, image, or marketability of someone or some organization (the driver) with the power to carry or 'transport' your cause (the rider) to prominence in the public or professional eye" (p. 205).

Dettmer, P. (1991). Gifted program advocacy: Overhauling bandwagons to build support. *Gifted Child Quarterly*, 35, 165-172.

After a Delphi study found that advocacy was ranked in last place among twelve gifted issues needing attention, Dettmer expressed a need for "advocates for advocacy" so that gifted and talented education might gain a lasting place in all public school education. The author lists these focus areas for gifted and talented advocacy: (a) promoting gifted education judiciously, (b) developing support among many different role groups, and (c) strengthening support levels within the role groups. A list of political, educational, and community groups are provided for building advocacy partnerships. A diagram of advocacy stages and a summary of key points are added to help build gifted program support.

Irvine, D. J. (1991). Gifted education without a state mandate: The importance of vigorous advocacy. *Gifted Child Quarterly*, 35, 196-199.

Using New York as an example, Irvine discusses positive and negative factors influencing state mandates for gifted education. The use of vigorous advocacy groups, financial incentives, mandatory screening for giftedness, and educational reform are all factors that promote the development of programs for gifted students. Some negative factors associated with the lack of a mandate include inequities in access to programs, difficulties in assuring the quality of programs, and limited access to teacher preparation programs. The author concludes that although progress can be made without a state mandate through the use of incentives, leadership, and advocacy, a mandate can more rapidly reduce the circumstances that are likely to deprive students of gifted and talented education and opportunities.

Karnes, F. A., & Marquardt, R. (1997). Know Your Legal Rights in Gifted Education. ERIC Digest E541.

Gifted preschool, elementary, and secondary school children have very limited protections under state and federal laws. By contrast, children and adults with disabilities have, under federal statute and in turn under state law accepting federal provisions, comprehensive protections in the following areas not yet applicable to the gifted: identification for screening and program admission or eligibility purposes, educational or other institutional and related services, employment policies and practices, architectural barriers in and about public buildings and transportation facilities, and other civil rights protections. Parents, educators, and other concerned adults involved with gifted children should know the legal framework in which the education and related services are set forth. This digest addresses concerns relating to the education of gifted children, including references for determining legal rights under state statutes; negotiation; mediation; due process; and use of the courts.

Rash, P. K. (1998). Meeting parents' needs. *Gifted Child Today*, 21(5), 14-17.

Reviews information that teachers can impart to parents to assist them in parenting gifted children. Subjects addressed include characteristics of gifted learners, the need for early identification, school options, advocacy, myths about gifted students, the charge of elitism, the need to organize parent associations, burnout, and resources.

Robinson, N. M. (2002). *Assessing and advocating for gifted students: Perspectives for school and clinical psychologists*. Storrs, CT: National Research Center on the Gifted and Talented.

This monograph summarizes research about the assessment of academically gifted students and addresses the kinds of advocacy a psychologist can offer. The components of a comprehensive assessment are described, noting that many tests developed for the age or grade of gifted students will fail to reflect their advanced abilities and skills. Assessment issues include group versus individual testing, the recency of the standardization, out-of-level testing, test basals and ceilings, and the effects of timing on performance. It points out that the reliability of ability tests is inversely correlated with the level of IQ, resulting in greater discrepancies among abilities for gifted than non-gifted students. Gifted students may also present some special personality concerns, such as a view of their abilities as outside of their control, which leads to fragility in the face of challenge, realistic anxiety about high stakes testing, perfectionism and meticulousness, and reluctance to give up on difficult items. Special situations are considered, such as testing the highly gifted, testing the very young, testing the coached student, and assessment of children from underserved minorities and/or ethnically isolated families. Appended are a reading list for school psychologists and a resource list for educators.

Ross, P. O. (1991). Advocacy for gifted programs in the new educational climate. *Gifted Child Quarterly*, 35, 173-176.

Ross expresses in this article that knowledge and access are keys in gifted and talented advocacy. She encouraged gifted educators to join district and state committees in order to obtain knowledge about current discussions and become active participants in efforts to transform services for gifted education. Some new initiatives, which might make a contribution to gifted education, include ungraded primary schools, assessment of student progress, student portfolios, and rigorous and revamped curricula. Ross believes that it is a vital duty of the gifted educator to be an integral part of task forces and committees that are involved in reform to shape and support school improvement for gifted students.

Shaklee, B. D., Padak, N. D., Barton, L. E., & Johnson, H. A. (1991). Educational partnerships: Gifted program advocacy in action. *Gifted Child Quarterly*, 35, 200-203.

These authors expressed the importance of forming educational partnerships for advocacy purposes to ensure that appropriate representation and services for gifted students are embedded within school reform frameworks. The article identified critical elements of successful partnership development and assesses the strengths and weaknesses of the example collaboration, Cooperation Alliance for Gifted Education, which was designed to enhance gifted and talented educational opportunities in an urban setting. Themes that emerged in the development of successful partnerships included having a clearly defined focus, specific outcomes, and sustained and systematic communication. For educators and advocates who are interested in developing a similar partnership, the authors offer step-by-step instructions for creating a Joint Partnership Advisory Council.

Zirkel, P. A. (2003). *The law on gifted education (RM03178)*. Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

This monograph provides a comprehensive, concise, and current overview of the law—specifically, legislation, regulations, and published court/administrative decisions - relating to gifted education for K-12 students. For students whose legal rights are based solely on their gifted status, the law largely boils down to (a) varying state statutes and/or regulations, and (b) for states with relatively "strong" (e.g., mandated individualized programming and impartial dispute-resolution mechanism) legislation/regulations, published hearing/review officer and court decisions that have enforced, but not expanded, the requirements for individualized programming. For gifted students who are also covered by other special status, such as those who have a disability or who are racial minorities, the legal issues are more complex and largely based on federal civil rights laws. For these "gifted-plus" students, the principal legal forums have been the U.S. Office for Civil Rights and the administrative/judicial process of the

Individuals with Disabilities Education Act. The leading issues in the gifted-plus cases to date have been eligibility, including underrepresentation, and free appropriate public education.

### Practice-based References

Berger, S. (2001). G + advocacy = gifted. *Understanding our Gifted*, 13(3), 25-28.

This article discusses the importance of advocacy for gifted education programs, identifies some basic truths in gifted education (such as the reality of giftedness and the demands it makes on children and parents), considers some controversial issues (such as the notion that "all children are gifted"), and examines current threats to funding of gifted education. World Wide Web sites to support gifted advocacy efforts are noted.

Bisland, A. (2003). Student-created public relations for gifted education. *Gifted Child Today*, 26(2), 60-65.

This article discusses the benefits of student participation in a gifted public relations campaign, including creating public support for gifted programming and developing leadership skills. Steps for developing a formal unit of instruction on public relations are described, along with ideas for public relations activities.

Grantham, T. C. (2003). Increasing Black student enrollment in gifted programs: An exploration of the Pulaski county special school district's advocacy efforts. *Gifted Child Quarterly*, 47, 46-65.

Results are presented of an advocacy event in Pulaski County, Arkansas, where one school district's efforts to desegregate their gifted program resulted in more black students enrolled. Different phases of a Gifted Program Advocacy Model are used to explain important components of the Pulaski County Special School District's advocacy efforts.

Hertzog, N. B. (2003). Advocacy: "On the cutting edge..." *Gifted Child Quarterly*, 47, 66-81.

This case study details the circumstances that led to a revised policy on gifted education in a large suburban school district. It discusses factors that affected advocacy efforts and emphasizes the importance of key individuals, commitment, tenacity, and the necessity of a system being in place for change to occur.

Ridges, J. (2000). Advocate role in developing district policy for gifted students. *Roeper Review*, 22, 199-201.

A teacher describes how parents and educators formed a coalition to bring programs for gifted students to their school district. The coalition organized groups for students, coordinated parent volunteers, formed information sessions with college professors, lobbied the State Board of Education, and worked with the School Board in hiring a person who might coordinate the gifted program. After the state legislature allocated money for districts to use in developing gifted programs, the district developed magnet programs, honors classes, AP classes, and a schoolwide enrichment model in the elementary schools. Eventually the district adopted policies with assessment and evaluation as integral components. The program has been sustained for over 20 years.

Delcourt, M. A. B. (2003). Five ingredients for success: Two case studies of advocacy at the state level. *Gifted Child Quarterly*, 47, 26-37.

Advocacy refers to individuals who believe in a particular cause and are willing to support it in multiple ways. This research includes two accounts of advocacy events regarding gifted education. In both cases, the result was legislation for increased funding and services for the gifted. This research describes how people met the challenge of being supporters of gifted education. Both group processes and individual efforts were analyzed. Five ingredients of success represented the key characteristics common to the leaders in each group: passion, preparation, inspiration, perseverance, and the ability to take advantage of serendipity. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

## Standard 10: Collaboration

### GT10S4

**Collaborate with individuals with gifts and talents, their families, general and special educators, and other school staff to articulate a comprehensive preschool through secondary educational program.**

#### Research-based References

Harmon, D. (2002). They won't teach me: The voices of gifted African American inner-city students. *Roeper Review*, 24, 68-75.

This study examined the effects of bussing from a lower income, predominantly minority, elementary school to a middle-to-upper income, predominantly majority elementary school. African American students who were bussed were asked questions about their relationships with their classmates, their classroom environment, and their relationships with their teacher. Students were angry about attending another school and being harassed and rejected by their white peers. They mostly stayed with their own minority group. They felt more comfortable and did not experience the harassment in their other school. They viewed ineffective teachers (i. e., those who won't teach them) as having low expectations, lacking understanding, and providing unfair and unequal treatment. On the other hand, effective teachers had high expectations, understood the culture, and provided fair and equal treatment. Three of the effective teachers were interviewed and spent considerable time developing activities and lessons that presented knowledge from multiple perspectives, required respect in their classrooms and provided community role models.

Hertzog, N. B., & Fowler, S. A. (1999). Perspectives: Evaluating an early childhood gifted education program. *Roeper Review*, 21, 222-227.

This article describes the evaluation process used in evaluating an early childhood gifted education program. Using the Responsive Evaluation Model by Robert Stake, a plan was developed that illuminated stakeholders and decision-maker issues. A matrix was developed and included six groups, questions and issues, and sources of data. Using the matrix, four domains for evaluation emerged: cost-effectiveness of the program, congruity with the mission of the university, educational outcomes and benefits for students, and validity of program format. External evaluators observed in classroom, talked with the teachers and support staff, met with administrators, and met with a focus group of parents. The authors describe the impact of the evaluation which included specific changes in the screening process, the curriculum, parent education, research, staff retention and development, and ties to the university.

Moon, S. M. (1996). Using the Purdue three-stage model to facilitate local program evaluation. *Gifted Child Quarterly*, 40, 121-128.

The author describes the Purdue Model and its use as a framework for evaluation. Moon provides an example of how the Purdue Model was used to evaluate a staff development program whose topic was the design of Self-Evaluations. The in-service training incorporated a needs assessment; goals; opportunities for interaction among participants; a trained consultant; differentiated instruction; and formative and summative evaluation. The goals helped participating coordinators (a) improve their evaluation knowledge and skills; (b) plan systematic, longitudinal, self evaluations of the short- and long-term effects of their gifted programs on cognitive, affective, and social students outcomes; (c) systematize the collection and storage of relevant student data; and (d) design and implement a micro-evaluation of one component of their gifted program.

Moon, T. R., & Callahan, C. M. (2001). Curricular modifications, family outreach, and a mentoring program. *Journal for the Education of the Gifted*, 24, 305-321.

This study focused on longitudinal interventions of mentoring, parental involvement, and multicultural curricula on academic achievement of 273 elementary students from low socioeconomic environments who participated in the Support to Affirm Rising Talent project. The Iowa Test of Basic Skills was administered multiple times over the course of two years in order to assess changes in student

achievement. The results suggested that the interventions had no statistically significant effect on student achievement in any grade. However, at-risk students were on grade level by the end of the project. In addition, students who participated in the project gained in their problem solving abilities, creativity, and social skills, and as a result were referred and placed more often than students who did not receive the project's benefits.

Robinson, N. M., Weinberg, R. A., Redden, D., Ramey, S. L., & Ramey, C. T. (1998). Family factors associated with high academic competence among former head start children. *Gifted Child Quarterly*, 42, 148-156.

This study drew a sample of 154 children with the highest achievement (top 3%) from a 5,142 National Head Start/Public School Early Childhood Transition Demonstration Project. At the end of the first grade, data were collected through interviews with parents, the Peabody Picture Vocabulary Test, Revised, Woodcock-Johnson Tests of Achievement, Parent Health and Depression Questionnaire, Social Skills Rating System, Your Child's Adjustment to School, and What I Think of School. In comparing this sample to the remainder of Head Start participants, the researchers reported that the parents of the high achieving children were more responsive and flexible in their parenting practices and able to communicate the importance of school to their children. Teachers report slightly greater involvement of these parents in school. Both parents and teachers rated the social behavior of these children as more positively than the comparison group in the areas of assertiveness and self-control. The authors conclude "society has a stake in these high achieving children and in their families and it is essential that we seek ways to ensure that their development is nurtured" (p. 155).

Wade, R. C., & Putnam, K. (1995). Tomorrow's leaders? Gifted students' opinions of leadership and service activities. *Roeper Review*, 18, 150-151.

The sample in this study included 145 high school sophomores and juniors who attended a summer program at the Connie Belin National Center for Gifted Education at the University of Iowa. These students completed a questionnaire about their feelings toward student council and community service. Overall 81 students mentioned a positive benefit of student council activities while 61 cited at least one problem and 14 students were neutral. Students had more positive (99) than negative comments (41) to make about community service. Two themes emerged from their comments: Students want to make a difference in their schools and communities, and students want to have a choice about how and when to serve in their communities.

### **Literature/Theory-based References**

Chance, P. L. (1998). Meeting in the middle: Gifted education and middle schools working together. *Roeper Review*, 21, 133-138.

The author compares curriculum characteristics of gifted education and middle schools. Middle school models emphasize physical-cultural curriculum that includes fine arts, physical education, practical arts, and cultural studies and analytical curriculum that includes language, mathematics, social studies, and science. Concerns of early adolescence and social issues are addressed through problems. Similarly, gifted education models emphasize integrated curriculum that focus on meaningful social problems. The author concludes that there are more similarities between the two models than differences.

Rogers, K. B. (2001). *Re-Forming gifted education: How parents and teachers can match the program to the child*. Scottsdale, AZ: Great Potential Press.

Because current early childhood and elementary education programs for gifted students are often inadequate and do not fit the particular gifted child, parents of gifted children need to present schools with educational plans. Dr. Rogers explains various programs for acceleration and enrichment, as well as grouping practices. For each educational option, she delineates what current research says about the benefit or lack of benefit to which types of gifted children, and she explains how to arrange each option. Features: Types of giftedness, Gifts versus talents, Assessment tools, Parent Inventory for Finding Potential, Types of acceleration, Types of enrichment, Group learning, Independent study, Yearly Educational Plans, Negotiating with schools

Shore, B. M., & Delcourt, M. A. (1996). Effective curricular and program practices in gifted education and

the interface with general education. *Journal for the Education of the Gifted*, 20, 138-154.

This article describes the results of a review of recommended practices in gifted education. The authors identify 5 practices that are uniquely appropriate to gifted education and receive strong research support: acceleration; career education, especially for girls; ability grouping; high-level curricular materials; and program arrangements such as pull-out, separate class, special school programs, and cluster grouping in mathematics. The authors identify 8 practices that need further research to confirm that they are uniquely appropriate for gifted students. They identify 13 practices effective with gifted students but generally applicable to all students such as enrichment, creative abilities, problem solving, individual programming, mentor or apprenticeship programs. They identify 13 practices that have insufficient evidence to make a case for their uniqueness for gifted students such as multidisciplinary curriculum, thinking skills, in-depth investigation of subject matter. They conclude that solid evidence exists to support a core of practices that appears to enhance the affective and cognitive growth of very able children and another group of practices that they can share with general education.

Stephens, K. R. (1999). Parents of the gifted and talented: The forgotten partner. *Gifted Child Today*, 22(5), 38-43, 52.

Discusses how educators can provide parents of gifted students with the skills, knowledge, and assistance necessary to nurture their children's social, emotional, and intellectual development. Strategies include developing parent workshops, encouraging parent participation, and providing preservice teachers with coursework that focuses on effective communication and collaboration with parents.

Strip, C. & Hirsch, G. (2001). Trust and teamwork: The parent-teacher partnership for helping the gifted child. *Gifted Child Today*, 24(2), 26-30, 64.

This article discusses the need for teachers and parents to work together to help gifted students. It lists 10 principles for the identification and recognition of giftedness that parents and teachers should adhere to, including learning as much as possible about characteristics and needs of gifted children.

Tomlinson, C. A. (1995). *Gifted learners and the middle school: Problem or promise?* ERIC Digest E535. ERIC Clearinghouse on Disabilities and Gifted Education, Reston, VA.

Historically, tension has existed between gifted education and middle school education (Tomlinson, 1992), leaving some advocates of each educational practice suspicious of the other, and leaving middle school students who are advanced in one or more dimensions of learning in a sort of educational no-man's-land. While some legitimate areas of disagreement are likely to persist, there are enough areas of shared belief to bridge the practice between gifted education and middle school education. This digest provides an overview of (1) some areas of agreement between the fields, (2) some areas of tension, and (3) some promising directions that could engage educators in mutual planning of appropriate services for all middle school students, including those we sometimes call "gifted."

VanTassel-Baska, J. (1992). *Planning effective curriculum for gifted learners*. Denver, CO: Love.

Contains chapters on collaborating with family and special educators including: Serving the Learning Disabled Gifted Student Through Collaboration, Curricula for Exceptional Children: A Special Education Perspective, Gifted Children with Specific Learning Disabilities, Bridging Family and School: A School Psychologist Perspective, and An Individualized Plan for Diane Bradford.

VanTassel-Baska, J. (1991). Serving the disabled gifted through educational collaboration. *Journal for the Education of the Gifted*, 14, 246-266.

Background information is provided on gifted students with learning disabilities and/or physical impairments. The need for collaborative interventions to meet the needs of these students is discussed, viewing collaboration as personal interaction, as the interaction of roles, and as interinstitutional interaction. A collaborative/consultation model is described.

### Practice-based References

Avery, L. D., VanTassel-Baska, J., & O'Neill, B. (1997). Making evaluation work: One school district's experience. *Gifted Child Quarterly*, 41, 124-132.

This evaluation incorporated three components: collecting data for program improvement; identifying key program areas; and increasing utility by formulating action plans within the recommendations. The design included (a) observations of gifted and regular classrooms; interviews with building principals and other key administrators, teachers of the gifted, and parent groups; (c) educator and parent surveys focusing on priorities for re-definition and expansion of the program, and (d) student, teacher, and parent questionnaires. The researchers found little difference between the gifted and regular classrooms; although more accelerated content and problem-centered curriculum was used in the gifted program. Both teachers and students perceived the gifted program as affecting students' ability to think about complex ideas, to listen to others, to problem solve, and to be more creative. All but one of the recommendations was incorporated into the district's plan of action. The authors conclude by making recommendations for other evaluators: (a) link the evaluation to a practical, not an ideal level; (b) allow diverse opinions to emerge in the evaluation process; (c) frame recommendations so that administrators have flexibility in their implementation.

Cooper, E. E., Ness, M. & Smith, M. (2004). A case study of a child with dyslexia and spatial-temporal gifts. *Gifted Child Quarterly*, 48, 83-94

(from the journal abstract) This case study details the history and K-5 school experience of a boy with dyslexia and spatial-temporal gifts. It describes assessment, evaluation, and identification procedures; the learning specialist's interventions and program; the critical role of the parent; and the services provided by the gifted program. Specific interventions are described for both remediating dyslexia and supporting the spatial-temporal gift. A literature review of dual exceptionalities is included and suggests that mathematical difficulties be included in the definition of dyslexia. A definition of spatial-temporal intelligence provides an understanding of 4-dimensional space-time.

Riley, T. L. (1999). Put on your dancing shoes! Choreographing positive partnerships with parents of gifted children. *Gifted Child Today*, 22(4) 50-53.

Uses the analogy of dance to discuss development of positive relationships between teachers and parents of gifted children. Emphasis is on providing parents with necessary information, overcoming barriers to true partnerships, and rules of thumb for implementing the partnership on an ongoing basis, such as following the golden rule in communication and remaining positive.

Strop, J. (2000). Meeting the needs of highly gifted students in a large comprehensive public high school. *Understanding our Gifted*, 12(2), 17-20.

This article describes the way one Colorado comprehensive high school attempts to meet the needs of highly gifted students, noting features such as the principal's awareness of and commitment to gifted and talented students, staff development of counselors and teachers, and academic and affective support for students.

### Standard 10: Collaboration

#### GT10S5

**Collaborate with families, community members, and professionals in assessment of individuals with gifts and talents.**

### Research-based References

Fernández, A. T., Gay, L. R., Lucky, L F., & Gavilan, M. R. (1998). Teacher perceptions of gifted Hispanic limited English proficient students. *Journal for the Education of the Gifted*, 21, 335-351.

This study examined the relationship between teachers' ethnicities and the way they rated characteristics

for gifted Hispanic LEP students and any gifted student. Of 373 teachers who participated, 162 were Hispanic, 137 were White, and 74 were African American. Using the Survey on Characteristics of Gifted and Talented Hispanic Students (Marquez et al., 1992) and an adapted form that removed all of the characteristics that related specifically to Hispanic students, the researcher found similarities and differences in teacher perceptions. The authors conclude that teachers tend to perceive language abilities as important characteristics of giftedness that may have negative implications for gifted Hispanic LEP students.

Louis, B., & Lewis, M. (1992). Parental beliefs about giftedness in young children and their relation to actual ability level. *Gifted Child Quarterly*, 36, 27-31.

The sample for this study was 118 parents and their children who contacted a Gifted Child Clinic. In describing their children, parents identified 26 different characteristics with language, memory, and abstract thinking most frequently cited. The authors found that parents were good judges of the gifted status of their preschool children with 61% of their children having intelligence scores of 132 or above and the remainder having above average ability (IQ=118).

Pletan, M. D., Robinson, N. M., Berninger, V. W., & Abbot, R. D. (1995). Parents' observations of kindergartners who are advanced in mathematical reasoning. *Journal for the Education of the Gifted*, 19, 30-44.

This study examined two major questions: What behaviors and abilities do young, mathematically precocious children display? Are parents able to recognize such precocity? The researchers mailed a questionnaire to 120 parents of gifted kindergarten children. The sample was primarily Caucasian (77%), with Asians constituting 13%, African Americans (6%), and other groups (4%). The parents frequently mentioned adding, subtracting, and multiplying; counting; interest in money, computer games, board games, and telling time; making up story problems; reading road signs; and using arithmetic workbooks. Five factors were found to characterize the parents' responses: (a) general intellectual factor, (b) short- and long-term memory, (c) rote memory, (d) spatial reasoning, and (e) specific relationship knowledge. They concluded that parents can indeed identify advanced abilities in mathematics.

Scott, M. S., Deuel, L. S., Jean-Francois, B. & Urbano, R. C. (1996). Identifying cognitively gifted ethnic minority children. *Gifted Child Quarterly*, 40, 147-153.

A survey was sent to White, Hispanic and Black parents of children in the gifted and talented program of a large urban school district. The results indicated that there were few differences among the three parent groups in the attributes that they believed were current descriptors of their gifted child. Common descriptors included "seeks information," "learns quickly," "school performance," "reading," "performs above peers," "general memory," "interest in learning," "problem solving," "communication skills," and "is aware of environment." However, more White families requested an evaluation of their child for possible placement in the gifted and talented program. The authors conclude that less referral among minority groups may result in fewer students in the gifted program.

Scott, M. S., Perou, R., Urbano, R., Hogan, A., & Gold, S. (1992). The identification of giftedness: A comparison of white, Hispanic and black families. *Gifted Child Quarterly*, 36, 131-139.

Using a survey with 600 families, these researchers asked parents from different ethnic backgrounds to generate characteristics about their children. More similarities than differences were found across the three groups. The authors found that fewer minority parents request an evaluation of their child for possible placement in the gifted and talented program. The authors conclude that this reluctance might contribute to the underrepresentation of minority students in gifted programs.

Windecker-Nelson, E., Melson, G. F., & Moon, S. (1997). Intellectually gifted preschoolers' perceived competence: Relations to maternal attitudes, concerns, and support. *Gifted Child Quarterly*, 41, 133-144.

This study examined the relationship between maternal attitudes, concerns, and support networks and perceived competence. A sample of 28 three to five-year-old gifted children were administered the Pictorial Scale of Perceived Competence and Acceptance for Young Children and Parental Attitudes toward Child-Rearing. Mothers of gifted preschoolers rated themselves as allowing more independence and less strictness than mothers of a more heterogeneous sample. "Balanced" parenting was positively

associated with gifted children's perceived cognitive/physical competence and social acceptance. The frequency of the child's direct contact with the mother's support network was also positively related to the child's perceived cognitive/physical competence and overall competence.

### **Literature/Theory-based References**

Dawson, V. L. (1997). In search of the wild bohemian: Challenges in the identification of the creatively gifted. *Roeper Review*, 19, 148-152.

The author suggests that teachers may respond to well-mannered creative children but may fail to recognize the talents of less conforming creative students. She recommends that teachers assess students in non-school settings, evaluate behaviors instead of personalities, and examine classroom management procedures.

Ford, D. Y., & Harris, J. J. (1990). On discovering the hidden treasure of gifted and talented black children. *Roeper Review*, 13, 27-32.

These authors provide recommendations for identifying black children. They suggest building trusting relationships; becoming aware of cultural differences; providing role models, mentor, and group counseling; involving the community; using non-traditional instruments; and involving parents.

Haroutounian, J. (1995). Talent identification and development in the arts: An artistic/educational dialogue. *Roeper Review*, 18, 112-117.

The author recommends procedures for identifying artistic talent. Tests should only be used along with observation and assessment of student performance and products. Educator and artists should collaborate in the identification process.

Strip, C. & Hirsch, G. (2001). Trust and teamwork: The parent-teacher partnership for helping the gifted child. *Gifted Child Today*, 24(2), 26-30, 64.

This article discusses the need for teachers and parents to work together to help gifted students. It lists 10 principles for the identification and recognition of giftedness that parents and teachers should adhere to, including learning as much as possible about characteristics and needs of gifted children.

### **Practice-based References**

Kingore, B. (1995). Introducing parents to portfolio assessment: A collaborative effort toward authentic assessment. *Gifted Child Today*, 18(4), 12-13, 40.

The use of a portfolio as a source of information about a student's attitudes, level of development, and growth over time can be a collaborative effort between the child and teacher and can increase parents' awareness of their child's abilities and needs. Selecting materials for the portfolio and different ways to use the portfolio are discussed.

Matthews, D., & Menna, R. (2003). Solving problems together: Parent/school/community collaboration at a time of educational and social change. *Education Canada*, 43(1), 20-23.

Research on teaching and learning emphasizes the need for school-family partnerships, student engagement, opportunities for relevant and authentic learning, and community involvement in the learning process. The case of a gifted but bored "problem student" shows how a school counselor encouraged collaborative problem solving among teachers, parents, and the student himself that drew on community-based learning opportunities.

Reyes, E., Fletcher, R., & Paez, D. (1996). Developing local multidimensional screening procedures for identifying giftedness among Mexican American border population. *Roeper Review*, 18, 208-211.

This article reports the results of screening procedures at two rural elementary schools located on the new Mexico-Texas-Mexico border. The ethnic composition of this school is 97% Hispanic, 2% white, non-Hispanic, and less than .5% African American. The identification process included training of local personnel that is designed for the particular community, a multidimensional screening that included

student portfolios, the Torrance Test of Creative Thinking, the Matrix Analogies Test, student self-identification, and teacher, parent, and community inventories.

## Standard 10: Collaboration

### GT10S6

**Communicate and consult with school personnel about the characteristics and needs of individuals with gifts and talents, including individuals from diverse backgrounds.**

#### Research-based References

Hansen, J. B., & Feldhusen, J. T. (1994). Comparison of trained and untrained teachers of gifted students. *Gifted Child Quarterly*, 21, 204-206.

The abilities of trained and untrained teachers in gifted education are examined in this article. Trained observers and students collected data on the teachers' abilities in the classroom. Teachers of the gifted with three to five graduate courses were significantly more effective in instruction and in creating a positive classroom environment than those without advanced training. The authors conclude that specialized coursework in gifted education provided teachers with the means to deliver appropriate instruction to gifted students.

Karnes, F. A., Stephens, K. R., & Whorton, J. E. (2000). Certification and specialized competencies for teachers in gifted education programs. *Roeper Review*, 22, 201-202.

State consultants of gifted education were mailed a survey designed to generate current information regarding the status of certification of teachers of the gifted within their respective states. Information relating to the existence of published competencies for teachers of the gifted was requested. The survey was mailed in the fall of 1998. Data were obtained from all 50 states. Results indicated that a total of 28 states have certification/endorsement in gifted education. Of these states, Indiana, Montana, and Texas indicated that certification in gifted education is optional. Twenty-two states indicated that they have no special certification requirements for working with gifted students. Only two states (Alabama and Louisiana) reported requiring a master's degree for certification in gifted education.

Landrum, M., Katsiyannis, A., & DeWaard, J. (1998). A national survey of current legislative and policy trends in gifted education: Life after the national excellence report. *Journal for the Education of the Gifted*, 21, 352-371.

The purpose was to examine the nature and availability of state legislative and policy provisions for gifted students and to identify general state efforts to address the seven initiatives articulated by the *National Excellence Report*. Surveys, which included both open-ended and forced-choice items, were mailed to education departments in all 50 states. Responses were received from 42 states. Findings indicated that progress has been made toward some of the seven initiatives, while little or no change has occurred for others. Specifically, progress was limited to the areas of teacher preparation, enhanced curricular standards for gifted learners, and efforts to match world standards. Twenty-five states indicated that they had certification in gifted education with 23 indicating that they had more complex content and higher performance standards for gifted students. Further findings indicated some limited efforts toward serving early childhood gifted students, expanding the inclusion of disadvantaged and minority students, and broadening the definition of giftedness.

Tomlinson, C. A., Callahan, C. M., & Lelli, K. M. (1997). Challenging expectations: Case studies of high-potential, culturally diverse young children. *Gifted Child Quarterly*, 41, 5-17.

Data from eight case studies of primary age children who participated in START (Support to Affirm Rising Talent) were reported in this study. These children were previously identified using procedures based upon Howard Gardner's multiple intelligence theory. Teachers nominated four of the children as "successful" and four as "unsuccessful." Data were collected through three sets of classroom

observations and interviews with students, parents and teachers. In general, a child was more likely to be judged successful if he or she demonstrated outstanding ability in core subject areas and did not exhibit behavior problems. A child was likely to be judged unsuccessful if he demonstrated talent in nontraditional areas or required interventions for behavior. In three cases, students deemed unsuccessful in one classroom were deemed successful in another classroom or vice versa. In these cases, judgment was more a product of teacher differences than changes in the children. Factors that worked included mentorships, family outreach, and classroom modifications.

Westby, E. (1997). Do teachers value creativity? *Gifted and Talented International*, 12, 15-17.

The authors were interested in studying the degree to which teachers' conceptions of creativity agree with conceptions of creativity held by researchers. Teachers were asked to rate characteristics of their favorite and least favorite students. These characteristics were rated by 35 non-education-major college students on a rating scale to determine their perceptions of the ten traits as most typical or least typical of a creative child when compared to Sternberg and MacKinnon's characteristic lists. There was a high positive relationship between the teachers' least favorite students and these characteristics. Teachers were then asked if the creative child prototype was typical of a creative child. The authors found differences in the teachers' anecdotal descriptions and researchers' checklists. The authors conclude that teachers value only some of the characteristics associated with creativity.

### Literature/Theory-based References

Karnes, M. B., & Johnson, L. J. (1991). The preschool/primary gifted child. *Journal for the Education of the Gifted*, 14, 267-283.

This article summarizes the historical trends in the education of young gifted children beginning with Hunt's (1961) seminal book, *Intelligence and Experience*. Along with Bloom (1964), Hunt suggested that the early years were significant in the development of intelligence. Feldman also emphasized the importance of the early years of child prodigies. Even with this literature support, programs for young gifted children are limited. The authors believe that five barriers inhibit comprehensive services: lack of parent advocacy, lack of appropriate teacher training, emphasis on older students among gifted educators, financial constraints, and legal roadblocks. The authors then describe current programs for young gifted children with special emphasis on diverse groups. They encourage gifted educators to use an ongoing identification process and compare groups with similar characteristics (e.g., children from lower income backgrounds with other children from lower income backgrounds).

Karnes, F. A., & Lewis, J. D. (1996). Staff development through videotapes in gifted education. *Roeper Review*, 19, 106-110.

The authors believe that using videotapes that target the gifted population can enhance staff development in gifted education. Approximately 89 videos are available on a wide spectrum of topics including characteristics, creativity, critical issues, curriculum, identification, internal perspectives, and programming. This article provides an annotated listing of videotapes in gifted education along with an address list of distributors.

Landrum, M. S. (2003). *Consultation in gifted education: Teachers working together to serve students*. Mansfield, CT: Creative Learning.

This manual is a guide to consultation and collaboration for educators of gifted children and is based on the Resource Consultation and Collaboration Program implemented at 10 schools in Charlotte, North Carolina, over 2 years. Individual chapters of the manual address the following topics: (1) overview of resource consultation and collaboration programs; (2) components of resource consultation and collaboration programs; (3) implementing a resource consultation and collaboration program in gifted education; (4) resource consultation and collaboration program staff development; (5) exemplary practices in differentiating curricula and instruction for gifted learners through resource consultation and collaboration; (6) exemplary differentiated lessons delivered through resource consultation and collaboration; (7) prototype schools with resource consultation and collaboration programs in gifted education; and (8) program pointers and potential pitfalls. An appendix provides various reproducible forms.

Parker, J. (1996). NAGC standards for personnel preparation in gifted education: A brief history. *Gifted Child Quarterly*, 40, 158-164.

This article describes a 1992 symposium that addressed the need for the development of professional standards for graduate programs in gifted education. In the spring of 1993, 50 educators from around the nation began refined and synthesized the information using a modified Delphi approach. The end result of these efforts was the *NAGC Standards for Graduate Programs in Gifted Education*. These standards incorporate a set of concepts, skills and other professional competencies that leaders in the field have identified as essential for individuals preparing to provide direct services to gifted students. The document is designed to serve two purposes: (a) set standards for institutions attempting to develop or refine graduate programs that prepare personnel for professional roles in gifted education; and (b) to prescribe criteria on which internal and external evaluation of these programs is based. A copy of the document is placed at the end of the article.

Robinson, A. (March 6, 2000). *Connecting the curriculum for excellence: English vertical teams*. Paper presented at the National Curriculum Network Conference, College of William and Mary, Williamsburg, VA.

This paper discussed using vertical teaming as a way to organize multi-year curriculum planning for academically talented adolescents. Vertical teams include educators from different grade levels in a given discipline who work cooperatively to develop and implement a vertically aligned program aimed at helping students acquire the skills necessary for success in the Advanced Placement Program. In such a team, the benchmark used to align the curriculum is the Advanced Placement examination that anchors the student outcome expectation. The purpose the AP Vertical Team is to include students who might not otherwise participate in the Advanced Placement program, including students of color or students from low-income homes. The second purpose of the team organization is to develop appropriate curriculum for each grade level. Curriculum examples are provided to illustrate the use of vertical teams in English literature. The teams are highlighted to illustrate that teachers who work together toward a common goal use locally developed strategies to facilitate their curriculum planning and that teachers at each grade level in the team can make a contribution to the advanced student's understanding and appreciation of complex ideas in a discipline.

### Practice-based References

Coleman, M. R. (1998). Are we serious about meeting student needs? *Gifted Child Today*, 21(1), 40-41.

Six suggestions for individualizing instruction include: (1) grouping kids for instructional needs; (2) reducing class size; (3) providing additional resources; (4) increasing the amount of instructional time; (5) utilizing support personnel; and (6) preparing personnel with skills needed for individualization.

Strop, J. (2000). Meeting the needs of highly gifted students in a large comprehensive public high school. *Understanding our Gifted*, 12(2), 17-20.

This article describes the way one Colorado comprehensive high school attempts to meet the needs of highly gifted students, noting features such as the principal's awareness of and commitment to gifted and talented students, staff development of counselors and teachers, and academic and affective support for students.

Hébert, T. P. (1998). DeShea's dream deferred: A case study of a talented urban artist. *Journal for the Education of the Gifted*, 22, 56-79.

The author studied DeShea, an African American male attending high school, using classroom observations, field notes; individual interviews with DeShea, his former art teacher, current high school teachers, and guidance counselor; and a document review of his school records. Although his achievement test scores indicated superior ability, he was failing English, US History, and chemistry. All of these courses were general track classes. Results indicated that these factors contributed to his poor performance: a mismatch between his high school art teacher's approach and his learning style, inappropriate counseling, serious personal problems at home, and his connection to other underachieving students. This suggests the importance of educating counselors about gifted and talented students.