

RARE GIFTS

and talents often are untapped and untaught, with just a portion of the population who have artistic talent being served. Furthermore, there is still much to be learned in terms of understanding these students' abilities and needs. This article shares current research regarding characteristics of artistically talented students. Usually recognized for outstanding drawing ability, young visual artists also may excel because they demonstrate original ideas or innovations independent of their advanced drawing skills. Other indicators of talent in the arts may be high levels of motivation, passion, perseverance, or problem-solving skills (Clark & Zimmerman, 1998). Those of us who have had the opportunity to work with talented young artists know that they are drawing upon many other abilities. The following profile of a young artist will help illustrate the major points of this article.

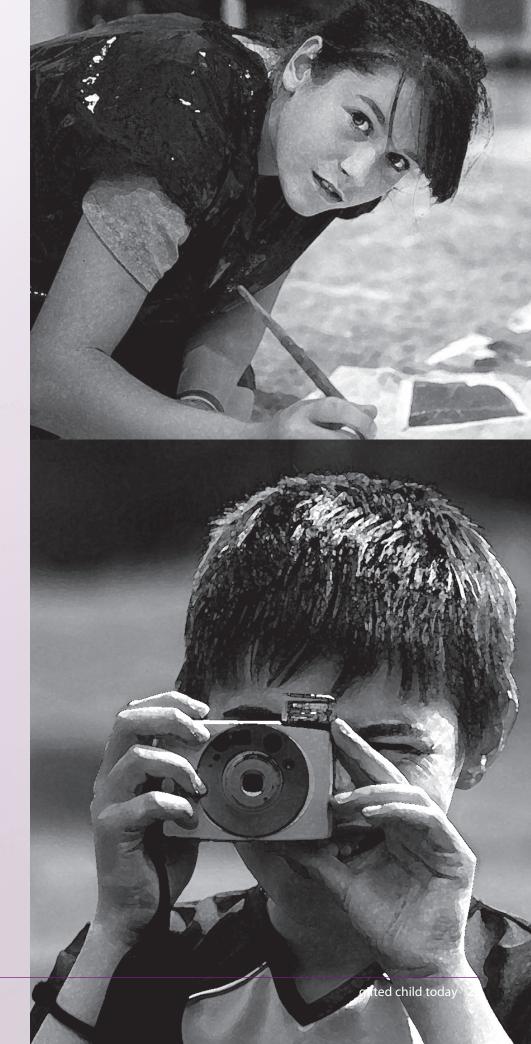
Frankie—Set Designer (17 years old)

First, "Frankie" is defined as a talented young artist because he attends a program with extensive admission criteria *and* demonstrates that he is among the top 10% of his age peers by winning top awards within that program (Gagné, 2003). As a talented visual artist, he also exhibits other cognitive strengths. Throughout his youth, supporting a realistic self-concept was necessary for his talent development. Additionally, Frankie's teachers helped him make connections between artistic thinking and

other intellects within the school program.

Frankie has stood out from his peers for his creative abilities since he was in the second grade. In elementary school he received encouragement from peers who asked him to draw action figures or miniature scenes of cars and trucks. He had several enthusiastic art teachers who all emphasized lessons in creative expression. Frankie admitted that, at first, he was not always serious about his artistic abilities. He initially made drawings, painted, and also performed in musical theater because of the accolades that he received, because people said that he was really good at it, and because it was just something that he enjoyed. Only later did one of the professional artists that he met at the arts conservatory center teach him to have faith in his own abilities and to own the "drive to achieve." This instructor taught Frankie that each and every time he is making a work of art, he has to "tell the story," whether he is painting, designing a set for stage, or dancing. Frankie learned that in the process of "telling the story" he has many opportunities to revise, rework, and make the story his own. At 17 years old, Frankie feels that he is now a completely different person because he has developed his own passion for making art. Just like the famous sculptors in Bloom's (1985) study, Frankie would not have reached his level of expertise without a supportive and encouraging environment, and long and intensive periods of training, first from loving and warm teachers and then from demanding and rigorous master teachers.

Frankie's mother lets him focus on the things that he loves. Although he has a B average in high school, she is



not overly concerned about his grades. In his fondness for reading, he takes after his mother who, like Frankie, reads from a wide variety of genres. Frankie feels that his mother's willingness to let him be "a free person" has contributed greatly to the development of his talent.

From this profile and others, we know that setting high expectations for achievement in the arts and making contact with other artists are powerful requisites for talent development. Yet, unlike the achievements of young mathematicians or scientists, the achievements of young artists are neither seen in the public eye nor in the field of education, as reflective of intellectual ability (Clark & Zimmerman, 1998).

Art Talent and Intellect

Although several prominent theorists claim that there is a lack of evidence that students who excel in the arts also exhibit intellectual giftedness (Csikszentmihalyi, Rathunde, & Whalen, 1993; Sternberg, 1985; Winner, 1996), some research speaks to their unique cognitive abilities. Rostan (2003) conducted case studies of two young talented visual artists enrolled in a private afterschool art enrichment program. Rostan found that the efforts of talented young artists require unique cognitive abilities. The young artists demonstrated planning, monitoring ongoing activity, learning from past experience and from other models, persistence, and evaluating one's own work.

Haroutounian (1995) outlined four perceptual and cognitive processes that are inherent in the arts: perceptual discrimination, metaperception, creative interpretation, and dynamic of performance. Perceptual discrimination begins with finetuned sensory awareness. According to Haroutounian, visual artists view, hear, and sense the world with acuity and a special awareness. Haroutounian defined metaperception as the artistic parallel to metacognition, a term used to describe mental monitoring in cognitive thinking. Metaperception also has been referred to as artistic knowing, thinking with an aesthetic sense, qualitative responsiveness, or qualitative intelligence. Metaperception can be understood as the internal manipulation and monitoring of the acute senses, perceptions, and emotions. Haroutounian described the artistic interpretive process as becoming more creative the more that a student reworks and refines his or her art. The end result is a unique personalized statement or creative interpretation. Finally, Haroutounian recognized that visual artists do not create their work in a vacuum. The dynamic of performance refers to the special abilities developed in the process of communicating a work of art. Haroutounian acknowledged that art is an aesthetic experience shared by the audience and the visual artist.

Researching the Intellectual and Self-Concept Profiles of Artistically Talented Students

With an underrecognized and understudied population such as that of artistically talented youth, descriptive information about their abilities and characteristics is vital in order to advocate for their educational needs. Looking at the relationships between intelligence, self-concept, and perception of artistic ability also is important in order to enable young artists to make a difference

in this world. Very little research is available regarding the intellectual and personal characteristics of young artists (Zimmerman, 2004) and existing studies vary greatly in their methods of gathering data, methods of measurement, and combinations of variables, all of which may create inconsistencies in interpretation.

Method

In this study, the author examined the factors that may influence the academic and arts achievement of artistically talented youth, primarily their reasoning abilities and several facets of their self-concept, including, but not limited to, their perception of their own skill in a specific arts domain.

Sample

Two hundred and seventy-two students in grades 9 through 12 served as the participants for this study. The students attend a public arts conservatory instructional center in the Southeastern United States. Admission to this center is by audition only, in one of six areas: visual art, music, theatre, dance, media arts, and creative writing. The acceptance process at this center is extremely selective, requiring transcripts, teacher recommendations, and essays as a screening process, before inviting a selection of promising students for an on-site audition. The visual arts program audition includes a portfolio evaluation and a still-life drawing assignment, as well as a personal interview with the student. Furthermore, some students must reaudition each year to stay in the program. According to the school administrator, the currently enrolled 400 students cut across all races, gender, and socioeconomic backgrounds; approximately 50% of the students currently enrolled come from families living below the poverty line.

Instruments

The subjects were assessed for intelligence using the Ravens Standard Progressive Matrices (SPM; Raven, Raven, & Court, 2000). The author also administered two different measures of self-concept. The Self-Description Questionnaire II (SDQII; Marsh, 1990) and the Arts Self-Perception Inventory (ASPI; Vispoel, 1993) were used to assess several areas of academic and general self-concept as well as selfconcept in the specific arts domains.

Results

This section presents the key findings regarding the intelligence and self-concept scores of these young artists in the context of existing literature. Positive aspects that characterize these student artists are highlighted such as overall academic self-concept and self-concept in peer relationships. For the young visual artists, this study also found that self-concept in visual art skill was positively related to high intelligence and that some subjects showed specific self-concept deficits when compared to artists in other domains.

Reasoning Abilities in Talented Young Artists

Several students made a perfect score on the Ravens Standard Progressive Matrices, and approximately 18% scored at the 90th percentile or above, scores that would qualify a student to be considered for intellectually gifted educational services in many states. In regards to specific studies, these results confirm Milbrath's (1998) longitudinal study of young visual artists, in which three

of the eight children had IQ scores within a range of 135 to 150. The demonstration of high levels of reasoning abilities in these young artists, who also excel in their arts domain, makes evident that talented art students draw upon a diverse source of human abilities, including aspirations, aesthetics, perception, sensitivity, and the capacity for reflection (Golomb,

Self-Concept in Talented Young Artists

The young visual artists and media artists, as well as the creative writers, dancers, musicians, and theater artists, all scored higher than average on all of the self-concept scales. This confirms some of the earliest and most influential research in gifted and talented education, in which Terman concluded that individuals who had made great achievements were relatively free from inferiority feelings, and were all-around emotionally and socially adjusted (Terman & Oden, 1959). In subsequent studies regarding artistically talented students, both Guskin, Zimmerman, Okola, and Peng (1986) and Blake (1996) found that artistically talented students had highly favorable views of themselves.

Regarding the subjects' overall positive academic self-concept scores in math, verbal, and general school in the author's research, the results seem to confirm Milbrath (1998), whose visually artistically talented subjects were high achievers in secondary school. Yet, the results contradict Bloom's (1985) and Csikszentmihalvi et al.'s (1993) findings with visual artists who perceived facing challenges and low commitment to general academic achievement. Csikszentmihalyi et al. (1993) found that young male visual artists expressed anxiety about personal attractiveness, yet all of the mean scores for self-concept in physical appearance in the current study were positive. Csikszentmihalyi et al. found that talented female visual artists perceived themselves as having poor family relations, yet all of the mean scores for self-concept in parent relationships in the current study were positive. An exploration of gender differences was beyond the scope of this study.

Despite the findings of Csikszentmihalyi et al. (1993) that young male visual artists expressed anxiety about peer relations, the mean scores for self-concept in same-sex relationships and opposite-sex relationships in the current study were positive. Csikszentmihalyi et al. also stated that talented students said they gained stimulation from themselves more so than from others, and they reported liking solitude far more than do most other people. Greenspan, Solomon, & Gardner (2004) found that talented children spent more time alone and with parents than nontalented peers and yet, the friendships that the children developed within their activities helped them persevere in their domain. Therefore, although talented students may feel that they gain more from solitude than do others, they still vearn for contact with other talented

The male visual artists in the Csikszentmihalvi et al. (1993) study expressed less confidence about their art abilities than the talented boys and girls in other domains. Yet, in the research presented above, all of the arts domain groups expressed positive mean scores for self-concept of skill in their own domains of visual art, dance, drama, and music. This is confirmed in the study by Marsh and Roche (1996), who found that talented dance, music, and drama students had substantially higher dance, music, and drama self-concepts than nontalented peers. Although Marsh, Chessor, Craven, and Roche (1995) found that participation in gifted programs or being placed in an advanced homogeneous class led to a "big-fish-little-pond effect," inferior comparisons to their peers were not apparent in the current sample. This is confirmed by Burleson (2004), whose students reported high artistic self-concept both before and after participating in a program for artistically talented youth.

Self-Concept in Visual Art Skill and Intelligence

More noteworthy were the significant findings from this study that self-concept in visual art skill was positively related to high intelligence. Indeed, this may speak more to the unique characteristics of artistically talented youth. This finding contradicts those who claim that there is no evidence that students who excel in the visual arts also exhibit intellectual giftedness (Csikszentmihalyi et. al, 1993; Sternberg, 1985; Winner, 1996). Although the results of statistical tests in this study indicated that artistic domain did not make a significant difference in intelligence scores, those who scored the highest in selfconcept in visual art were the visual artists and the media artists, and selfconcept in visual art skill positively predicted high intelligence. No previous research was found comparing the intelligence scores of young artists in different arts domains. Winner (1996) argued that the abilities demonstrated by young visual and performing artists are unrelated to the skills that are measured on intelligence tests. Nevertheless, this finding may be even more important because of the negative stereotype that equates artistic genius with neurosis (Rush, 1995) and the common view that achievements of young artists are not seen as reflective of intellectual ability (Clark & Zimmerman, 1998).

Comparing Visual Artists' Self-Concept to Artists in Other Domains

Despite overall high self-concept, when compared to dancers, actors, and creative writers at the arts conservatory, the visual artists had significantly lower self-concept in some specific areas. In this sample, theater artists had significantly higher selfconcept of physical abilities than visual artists, yet this group included a large percentage of musical theater students who receive a great deal of training in dance; therefore, their significantly higher self-concept of physical abilities than visual artists may be confirmed by studies applying to dance students. Creative writers were found to have higher self-concept of verbal ability than musicians and visual artists, which is expected due to the areas of their work (i.e., literature, poetry, and critical reading). Yet, most striking is the finding that visual artists had significantly lower selfconcept in general school than theater artists. This confirms the study by Csikszentmihalyi et al. (1993), who found young visual art students to have a low commitment to general academic achievement and poor academic skills.

The main differences found on the Arts Self-Perception Inventory (ASPI) scores are expected, due to the area of each artistic domain and the fundamental theory of domain specificity on which this research is based (Csikszentmihalyi et al., 1993; Feldman, 1985, 1999; Gardner, 1983, 1997; Winner, 1996, 2000). In other words, each artistic domain group had significantly higher scores for self-concept in the skills that are unique

to their domain. Nevertheless, the current findings build on Marsh and Roche's (1996) initial use of the ASPI with talented young artists attending a preprofessional arts high school.

Discussion and Recommendations

The exploration of possible links between intelligence and multifaceted self-concept is complicated by the fact that multiple criteria are required for identifying both intellectual giftedness and talent in the arts (Clark & Zimmerman, 1998). Despite the fact that identifying talent in the arts is so complex, there was good reason to choose intelligence as a factor for study, as these scores remain an important component for admission to intellectually gifted programs throughout the United States. Additionally, a number of researchers conclude that selfconcept should be considered a major factor, both negative and positive, in talent development and academic achievement (Burland & Davidson, 2002; Clark, 2002; Dai & Renzulli, 2000; Freeman, 2004; Gallagher, 2003; Hoge & Renzulli, 1993; Marsh et. al, 1995; Marsh, Kong, & Hau, 2000; Shavinina & Ferrari, 2004; Williams, 2003). In educating the whole child, with the understanding that students in this study may excel in more than one area, it is important to consider how abilities are related to self-concept. The research described above has explored the relationship of intelligence to arts abilities, as well as young artists' substantial self-concept in several multifaceted areas. In some deficit areas, such as verbal self-concept and general school self-concept, the needs of young visual artists have been illuminated, suggesting possible educational interventions. But, most importantly, the results of this particular study should promote a greater understanding of artistically talented students by teachers and parents and hopefully increase their recognition and identification. These understandings lead to the following recommendations for teachers and programs that serve artistically talented students.

Recognize Artistic Habits of Mind

One fundamental step in supporting artistically talented students is to help build self-confidence in their own intelligence and habits of mind. Particularly for the teacher of the gifted or practicing artist, it is important to share experiences with creative work and the role that metacognition and/or metaperception have played in the artistic process. When visual artists are thinking with an aesthetic sense, they are responding to and monitoring their own senses, as well as their own perceptions and emotions. This special mode of thinking is maintained throughout the artistic process as the artist reworks and refines his or her art. Therefore, within the context of making art in a classroom, there should be multiple opportunities to recognize, acknowledge, and communicate artistic habits of mind. For example, when engaged in a stilllife drawing activity, students may be asked to gauge their perceptions of passing time. Students also could share their reflections on how they solved problems, such as determining relationships of size or shape. When teachers share their own work, they should explain the formal problems that interest them and direct students to other artists who are interested in the same problems in their discipline. For example, an artist/teacher may want to describe the narrative aspects of a landscape drawing and also how he or she worked out the tonal structure over the course of several thumb-

nail sketches in ink before completing a final drawing in charcoal. By sharing such observations, talented young visual artists have the opportunity to improve upon both their working and thinking habits.

Engaging Students in Cooperative Tasks

Teachers of the artistically talented might engage students in cooperative tasks that demand different abilities and talents from different students. Authentic problems to solve, such as a group exhibition or group mural, would involve planning and organizational skills and additionally require students to apply mastered concepts to a new situation. In this regard, the multiple intelligences perspective may help artistically talented students appreciate their own strengths and weaknesses, as well as those of others.

Identifying Transferable Skills

Teachers of the artistically talented should identify transferable skills and abilities as a part of their instructional activities. For example, young visual artists may prewrite, draft a written artist's statement, use the peer review process, and have a group critique of their written statement, parallel to the process of creating a work of art.

Students may even keep a journal or continuous record of artistic reflections. As they practice or work on a particular creative piece, they should be encouraged to record experiences with metaperception. If these notes are saved in the journal or sketchbook, the student is able to return to the writings and learn from past experiences. Later, they may be able to expand upon these writings and possibly use a description of metaperception or problem-solving strategies in an essay for college entrance. This activity promotes high standards in writing and demonstrates similarities in the revision process across disciplines.

Promoting Academic Achievement

Unfortunately, self-concept often goes unsupported in regular school programs (Gallagher, 2003), leaving young artists to deal with cultural stereotypes that are based on both fact and fiction. Because art historians and art educators often have emphasized the peculiar characteristics of successful artists, the stereotype exists equating artistic genius with mental illness (Rush, 1995). The notion that mental illness is an important aspect of being an artist, and that the illness makes one a better artist, may affect

ONE FUNDAMENTAL STEP IN TO HELP BUILD SELF-CONFIDENCE IN THEIR OWN INTELLIGENCE AND HABITS OF MIND.

students. This myth of the eccentric genius is responsible for much of the public ambivalence about art and artists and can have a negative effect on talent development (Rush, 1995). Noting the true lack of funding for art programs and limited prospects for earning potential of artists (Csikszentmihalyi et. al, 1993), parents may not wish their child to pursue a career in the arts for fear of him or her becoming a "starving artist." Yet, according to 2006–2007 U.S. Department of Labor statistics, more people are employed in the visual arts than in all of the performing arts and sports industries combined (United States Department of Labor, n.d.). When stereotypes about artists are negative and inaccurate, the potential for harming individuals is all the greater. Perhaps equally harmful, stereotypes also may be self-fulfilling prophecies, especially for young artists. Having internalized the stereotypes, they may think, for example, that to be an artist, they must suppress their talents in other academic areas. The existence of an atmosphere that socially discourages achievement in the arts or pursuing a career in the arts may have a substantial impact on the way that artistically talented students view themselves (Shavinina & Ferrari, 2004).

The growth of the young artist's self-concept in relation to his or her domain does not occur in a social vacuum. Along with a passion, desire, or affinity for the subject is the subculture of the subject, and this subculture also contributes to the child's motivation (Dai & Renzulli, 2000). Teachers of the arts are important partners in students' talent development because they convey attitudes and provide content-specific information (Coleman, 2002). Encouraging artistically talented adolescents to explore many career options may

help them see the relevance of schooling, and an interest in a career path may help maintain enough academic involvement and achievement to mitigate low academic self-concept.

Collaborative Career Counseling

Involving parents and teachers of talented students in the planning and decision-making process is essential because of their major influence on their children's professional arts careers and lives. Therefore, Greene (2006) suggests collaborative career counseling. Career counseling for artistically talented students is an extension of their talent development, which should be a lifelong process of forming an accurate self-concept regarding abilities, potential, and achievement. Because they often are praised for initial efforts (Seeley, 1994), the concept of perpetual revision and evaluation of ability, potential, achievement, and self-concept is important for students who are talented in the arts.

Tools such as an annual talent growth plan may be helpful. The talent growth plan is created with the guidance of a school counselor, preferably someone who is trained in talent development. The plan begins with an inventory of the student's current abilities, interests, learning styles, activities, and experiences (Kay, 2001). Test scores are included on the growth plan and kept up-to-date so that the student may keep track of these statistics. It is important for the artistically talented student to be aware of his or her own accomplishments in order to achieve the most accurate self-concept possible. The second part of the growth plan is the development of short- and long-term goals. Thirdly, the growth plan is used to help students select courses and possible activities that will eventually help prepare them for their professional careers. A draft of the growth plan is taken home to consult with the parents and make any revisions if necessary. Eventually the goal of the growth plan is to help students manage their choices and talent development for themselves and be prepared for future educational and professional decisions. See Figure 1 for a sample talent growth plan.

Mentoring a Young Artist

For young artists, much of their talent development depends upon their interactions with adult artists. In this country, there are few formal systems of apprenticeship. Young artists need their parents or teachers to help them find resources for informal apprenticeships or mentorships. Local artists may provide afterschool enrichment courses, extended art activities, and opportunities to explore new media. Yet, many professional artists who do not offer formal instruction may be interested in mentoring young students who are interested in the arts. The opportunity for a service project to assist an artist in putting up an exhibition or preparing supplies could potentially teach the young artist much more than, for example, spending a quiet afternoon in a watercolor class. Making sure that a young artist has opportunities to exhibit artwork also is an important part of supporting the artist's growth because it gives exposure to the subculture of the visual art world and artistic habits of mind. By involving the child in the selection, preparation, and exhibition of artwork, the child will have the opportunity to build upon higher order thinking skills involved in aesthetics and art criticism. Furthermore, a mentor, whether she is a museum docent or a practicing studio artist, will be able to share her experiences in schooling and convey the relevance of

Frankie M. Name:

Grade Level: Entering 9th grade

Eighth Grade Team, First Semester: Visual Art Elective, Second Semester: Theatre Arts Elective **Current Courses:**

Achievement		Grade	Year
Clubs, Organizations			
County Art Association Children's Art Club Middle School Art Club Middle School Art Club Middle School Drama Club Middle School Art Club Middle School Drama Club		(5) (6) (7) (7) (7) (8) (8)	1999 2000 2001 2001 2002 2002
Test Scores			
CTBS (Comprehensive Test of Bas Reading Language Usage Math Math Computation Language Mechanics	sic Skills) 90th Percentile 68th Percentile 87th Percentile 76th Percentile 94th Percentile	(2)	1996
SSA (State School Assessment) Reading Math	87th Percentile 93rd Percentile	(3)	1997
SSA (State School Assessment) Reading Math	90th Percentile 93rd Percentile	(4)	1998
SSA (State School Assessment) Reading Math	96th Percentile 96th Percentile	(8)	2002
Exhibitions/Performances			
District Art Show 3rd-Place Drawing District Art Show—Clay Sculpture District Art Show 1st-Place Drawing All County Chorus All County Chorus All County Chorus		(3) (4) (5) (3) (4) (5)	1997 1998 1999 1997 1998 1999
School Awards, Honors			
Elementary School Reading Award		(3)	1997
Prior Experience in Gifted and Talented Programs Arts Conservatory Center Saturday Program Teen Acting Workshop Arts Conservatory Center Summer Institute Mentorships/Studio Experiences		(7) (8) (8)	2001 2002 2002
Assist in the Studio of Artist Sandi D.		(8)	2003

Figure 1. Talent growth plan.

Note. Adapted from Kay (2001) and Feldhusen (2003) in Colangelo, N., & Davis, G. (2003). Handbook of Gifted Education, 3/e. Published by Allyn and Bacon, Boston, MA. Copyright © 2003 by Pearson Education. Adapted by permission of the publisher.

Interest Analysis:	An Expression Style Inventory revealed interests in several Artistic domains including Dramatization and Manipulative. Frankie is also interested in children's books illustration, making clay sculptures, and painting murals.	
Learning Style:	Tactile/Kinesthetic. Frankie learns best through a hands-on approach. At times he finds it hard to sit still for long periods and may become distracted by his need for activity and exploration.	
Student's Own Goals		
Short-Term:	Improve drafting skills. Improve organizational skills (i.e., keep completed drawings together in a portfolio).	
Long-Term:	Pursue career interests in acting or architecture.	
Recommended Classes for Next Year:	Enter Visual Arts program at Arts Conservatory Center and attend half-day academic program at home high school.	
Recommended Extra-School Activities:	Continue to attend arts related events such as art exhibits, museum openings, festivals, plays, musicals, and operas.	
Recommended Activity in School:	Find like-minded peers at Arts Conservatory Center with whom to attend such events.	
Figure 1 Talent growth plan continued		

artistic thinking in her current profession.

Final Thoughts

Although a conservative estimate of the population of intellectually gifted students in the United States may be 2-5%, this can't be seen as a limit (Gallagher, 2003). There should exist a similar number of artistically talented students, whether formally identified or not. Furthermore, those who are identified as intellectually gifted do not preclude those who also are young artists, musicians, actors, dancers, or creative writers. Sternberg and Lubart (1993) have argued that people of high mental ability are predisposed to creative acts when other characteristics are also present. Unfortunately, characteristics such as tolerance of ambiguity, moderate risktaking, perseverance, openness to new ideas, and substantial self-concept often go unsupported in gifted and/or regular school programs (Gallagher, 2003).

When children study the visual arts, they learn to observe, envision,

and reflect upon their working process. In the process of creating, artists visualize and set goals to find and define a problem, choose techniques to collect data, reflect on their work, consider alternative points of view, evaluate and revise the problem solution, try out changes, and begin the cycle of revision again. Comparing this process to the scientific method makes a convincing argument for all of the arts as a critical and complex experience of discovery. In order to provide both enrichment and acceleration for the artistically talented child, rigorous academic and specialized art programming are necessary. GCT

References

Blake, P. L. (1996). Similarities and gender differences in personality attributes of talented adolescent visual artists. Dissertation Abstracts International, 57, 7A.

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

Burland, K., & Davidson, J. W. (2002). Training the talented. Music Education Research, 4(1), 121-140.

Burleson, K. A. (2004). Social comparisons at gifted schools for the arts: Qualifications for the big-fish-little-pond effect. Dissertation Abstracts International, 66, 2B. (UMI No. 3163489)

Clark, B. (2002). Growing up gifted (6th ed.). Upper Saddle River, NJ: Merrill.

Clark, G., & Zimmerman, E. (1998). Nurturing the arts in programs for gifted and talented students. Phi Delta Kappan, 79, 747-751.

Coleman, L. J. (2002). A shock to study. Journal of Secondary Gifted Education, *14*, 39–52.

Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). Talented teenagers: The roots of success and failure. New York: Cambridge University Press.

Dai, D. Y., & Renzulli, J. S. (2000). Dissociation and integration of talent development and personal growth: Comments and suggestions. Gifted Child Quarterly, 44, 247-251.

Feldhusen, J. F. (2003). Talented youth at the secondary level. In N. Colangelo & G. A. Davis (Eds.), Handbook of gifted education (3rd ed., pp. 229-246). Boston: Allyn & Bacon.

Feldman, D. H. (1985). The concept of non-universal developmental domains: Implications for artistic development. Visual Arts Research, 11(1), 82-89.

- Feldman, D. H. (1999). The development of creativity. In R. J. Sternberg, (Ed.), Handbook of creativity (pp. 169-183). New York: Cambridge University Press.
- Freeman, C. (2004). The crystallizing experience: A study in musical precocity. In E. Zimmerman (Ed.), Artistically and musically talented students: Essential readings in gifted education (pp. 39-55). Thousand Oaks, CA: Corwin Press.
- Gagné, F. (2003). Transforming gifts into talents: The DMGT as a developmental theory. In N. Colangelo & G. A. Davis (Eds.), Handbook of gifted education (3rd ed., pp. 60-74). Boston: Allyn & Bacon.
- Gallagher, J. J. (2003). Issues and challenges in the education of gifted students. In N. Colangelo & G. A. Davis (Eds.), Handbook of gifted education (3rd ed., pp. 11-23). Boston: Allyn & Bacon.
- Gardner, H. (1983). Frames of mind: The theory of multiple intelligences. New York: Basic Books.
- Gardner, H. (1997). Extraordinary minds. New York: Basic Books.
- Golomb, C. (2002). Child art in context: A cultural and comparative perspective. Washington, DC: American Psychological Association.
- Greene, M. J. (2006). Helping build lives: Career and life development of gifted and talented students. Professional School Counseling, 10(1), 34-42.
- Greenspan, D. A., Solomon, B., & Gardner, H. (2004). The development of talent in different domains. In L. V. Shavinina & M. Ferrari (Eds.), Beyond knowledge: Extracognitive aspects of developing high ability (pp. 119-135). Mahwah, NJ: Laurence Erlbaum Asso-
- Guskin, S., Zimmerman, E., Okola, C., & Peng, J. (1986). Being labeled gifted or talented: Meanings and effects perceived by students in special programs. Gifted Child Quarterly, 30, 61-65.
- Haroutounian, J. (1995). Talent identification and development in the arts: An artistic/educational dialogue. Roeper Review, 18, 112-117.

- Hoge, R. D., & Renzulli, J. S. (1993). Exploring the link between giftedness and self concept. Review of Educational Research, 63, 449-465.
- Kay, S. I. (2001). A talent profile for facilitating talent development in schools. Gifted Child Quarterly, 45, 45-53.
- Marsh, H. W. (1990). Self-Description Questionnaire II: A theoretical and empirical basis for the measurement of multiple dimensions of adolescent selfconcept: A test manual and research monograph. San Antonio, TX: Psychological Corporation.
- Marsh, H. W., Chessor, D., Craven, R., & Roche, L. (1995). The effect of gifted and talented programs on academic self-concept: The big fish strikes again. American Educational Research Journal, *32*, 285–319.
- Marsh, H. W., Kong, C., & Hau, K. (2000). Longitudinal multilevel models of the big-fish-little-pond effect on academic self-concept: Counterbalancing contrast and reflected-glory effects in Hong Kong schools. Journal of Personality & Social Psychology, 78, 337-349.
- Marsh, H. W., & Roche, L. A. (1996). Structure of artistic self-concepts for performing arts and non-performing arts students in a performing arts high school: "Setting the stage" with multigroup confirmatory factor analysis. Journal of Educational Psychology, 88, 461-477.
- Milbrath, C. (1998). Patterns of artistic development in children: Comparative studies of talent. New York: Cambridge University Press.
- Raven, J., Raven, J. C., & Court, J. H. (2000). Manual for Raven's Progressive Matrices and Vocabulary Scales, section 3: The Standard Progressive Matrices including the parallel and plus versions. San Antonio, TX: Harcourt Assessment.
- Rostan, S. M. (2003). In the spirit of Howard E. Gruber's gift: Case studies of two young artists' evolving systems. Creativity Research Journal, 15, 45-60.
- Rush, J. C. (1995). The myth of the eccentric genius: Some thoughts on political correctness and art educa-

- tion. Arts Education Policy Review, 97,
- Seeley, K. (1994). Arts curriculum for the gifted. In J. VanTassel-Baska (Ed.), Comprehensive curriculum for gifted learners (pp. 282-300). Boston: Allyn & Bacon.
- Shavinina, L. V., & Ferrari, M. (2004). Extracognitive facets of developing high ability: Introduction to some important issues. In L. V. Shavinina & M. Ferrari (Eds.), Beyond knowledge: Extracognitive aspects of developing high ability (pp. 3-13). Mahwah, NJ: Laurence Erlbaum Associates.
- Sternberg, R. J. (1985). Beyond IQ: A triarchic theory of human intelligence. New York: Cambridge University Press.
- Sternberg R. J., & Lubart, T. I. (1993). Creative giftedness: A multivariate investment approach. Gifted Child Quarterly, 37, 7-15.
- Terman, L. M., & Oden, M. H. (1959). The gifted group at mid-life: Genetic studies of genius, Vol. 5. Stanford, CA: Stanford University Press.
- United States Department of Labor. (n.d.). Occupational outlook handbook, 2006-07 edition, artists and related workers. Retrieved October 13, 2007, from http://www.bls.gov/oco/ ocos092.htm
- Vispoel, W. P. (1993). The development and validation of the Arts Self-Perception Inventory for adolescents. Educational & Psychological Measurement, *53*, 1023–1033.
- Williams, D. (2003). Examining psychosocial issues of adolescent male dancers. Dissertation Abstracts International, 64, 5A. (UMI No. 3090242)
- Winner, E. (1996). Gifted children: Myths and realities. New York: Basic Books.
- Winner, E. (2000). Giftedness: Current theory and research. Current Directions in Psychological Science, 9(5), 153–156.
- Zimmerman, E. (Ed.). (2004). Artistically and musically talented students: Essential readings in gifted education. Thousand Oaks, CA: Corwin Press.