Guest Editors' Comments on
Tending the Special Spark: Accelerated and Enriched Curricula for Highly Talented Art Students

Arts curriculum for gifted and talented students has not been given the attention it deserves in the field of gifted education. In this article, Gilbert Clark and Enid Zimmerman set forth recommendations for educating highly able artistically talented students based on work they were doing to establish a high school in Israel at the time the article was written.

The goal of the proposed residential high school was to "tend the special spark in talented youngsters, equipping them to lead Israel's scientific, artistic and community life...those who have within themselves, the greatest potential in arts or sciences—the top 1% of the nation's students." As members of the International Advisory Panel to this project, Clark and Zimmerman focused on issues associated with articulating goals for the arts and science curricula. The authors argue that a comprehensive art program for talented students needs to be addressed through a sequential curriculum based on acceleration across a scope and sequence of content, as is the education of gifted students in mathematics and science.

Clark and Zimmerman used a well-respected mathematics program, the Study of Mathematically Precocious Youth (SMPY), as a prototype for developing principles, techniques and identification procedures that could be implemented in the art curriculum. As mentioned in previous articles, SMPY was a project devoted to helping students who reason exceptionally well mathematically. Educational acceleration was shown to work with these highly able students, and Clark and Zimmerman describe how a similar program might be created for the visual arts.

While there are many school-based programs designed to serve artistically talented students, there has been little consensus about recommended identification procedures or instruments for such programs. Identification procedures for gifted and talented programs in mathematics and science have traditionally used standardized test results based upon IQ and specific subject matter tests, such as the kind used in SMPY. There are standardized tests available for creativity, such as the Torrance Tests of Creative Thinking and Guilford's Creativity Tests for Children, but these tests have been shown to have problems with validity (that is, whether they actually measure creativity or predict future creative behavior). Consequently, the authors adopted alternative methods of assessment for identifying talented students in the arts, such as nonstructured nominations, structured nominations, achievement test scores, academic records, grades in art courses, informal instruments, and performance reviews and observations.

In addition to specifying identification procedures, the authors discuss the need for teachers who have substantial knowledge of their field and for a curriculum which provides an articulated developmental sequence of instruction from novice to more sophisticated levels of instruction. By developing a coherent sequence of art skills, the authors are then able to assess achievement levels and provide learning opportunities that are educationally appropriate. Outside of math and science, few school subjects have curricula developed to accomplish this. This program illustrates the importance of developing such curricula in working with gifted students.

Tending the Special Spark: Accelerated and Enriched Curricula for Highly Talented Art Students

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In this article, recommendations are set forth for educating highly able artistically talented students at the proposed science and art high school in Israel, derived from Stanley's and other models in the education of academically gifted students. Consideration is given to areas of student identification and characteristics, teacher selection and strategies, curriculum content, educational arrangements and settings, and how practices of acceleration and enrichment relate to these areas.

Israel's proposed residential high school for students gifted in the arts and sciences will "tend the special spark in talented youngsters, equipping them to lead Israel's scientific, artistic and community life...those who have, within themselves, the greatest potential in arts or sciences—the top tenth of 1% of the nation's students" (Striving, n.d.). In order to accomplish these goals, two task forces were formed to create screening procedures to select students and select curriculum content to meet the school's educational goals. In addition, how to prepare teachers and create a suitable environment has been studied. As members of the International Advisory Panel to this project, we found that issues associated with formulating arts and sciences curricula for the proposed school are complex and unresolved. Some members of the panel proposed integrating arts and science classes, others proposed study of the arts and sciences as separate disciplines.

A more basic issue arose, following the advisory panel's meeting, as we considered the great disparity that currently exists between practices in art and science education in the United States. Science and mathematics education have been developed from the use of relatively systematic and standard curricula. Education of gifted students in the sciences and in mathematics, therefore, often has been based upon acceleration

across a recognized scope and sequence of content that is more or less commonly accepted. Curricula for the arts, both visual and performing, are far less systematic or standardized and, as taught, rarely follow a common scope and sequence of content. A comprehensive program for artistically talented students, however, needs to be based upon a sequential, articulated curriculum as the foundation for planned administrative arrangements for gifted students such as enrichment and acceleration (Clark & Zimmerman, 1984).

The article describes a well-known, respected mathematics program for highly gifted students, projects how a similarly organized program might be created for students who are highly talented in the visual arts, and discusses application of these ideas in such a school as the projected high school for highly gifted students in Israel.

Stanley's SMPY Program

In 1969, Julian Stanley, a professor of psychology at Johns Hopkins University, became involved in helping direct the education of a 12-year-old, mathematically gifted student. This simple beginning led, in 1971, to creation of the Study of Mathematically Precocious Youth (SMPY) at Johns Hopkins University and in 1980 to the Program for Verbally Gifted Youth (PVGY). SMPY's main function was to identify students who were highly gifted in mathematics and to direct a radical acceleration program for these students. At one time, SMPY was the vehicle for conducting national talent searches for mathematically precocious youth; at present the Center for the Advancement of Academically Talented Youth (CTY) performs this function (Barnett, Favazza, & Durden, 1983).

Stanley and a group of other researchers chose mathematical reasoning as a focus because they wanted to select a subject generally offered in the schools, provide a rapid acceleration program rather than create new curricula, and create a service for students with high intellectual talent (Stanley, George, & Solano, 1977). According to Fox (1974), who was one of the researchers, "Since the formula for precocious achievement in mathematics (i.e., aptitude plus encouragement plus opportunity) seemed simple and straightforward, we decided to see how well it would work" (p. 102). The group set forth three principles that would guide their work. These were that learning is a sequential and developmental process, large differences in learning capacities of individuals exist among students at any given age, and that effective teaching involves assessing each student's status in the learning process and posing problems that slightly exceed his or her level of mastery (Benbow & Stanley, 1983b).

The SMPY group used already available educational options and adapted them to the needs of their mathematically precocious students. They based their work upon a flexible set of options rather than setting forth a single program. Students were advised to remain in their local junior or senior high schools and follow an acceleration program designed to meet their individual needs. The least disruptive method of acceleration, according to the SMPY project designers, would be for a student to take as many stimulating high school courses as possible to ensure high school graduation and take courses from a local institute of higher education on a released time basis, during evenings, or throughout the summer. If these options were not feasible, the student could receive college credit for coursework through a program such as the Advanced Placement Program, enroll in correspondence courses at the high school or college level from a major institution, take special fast-paced courses in specific subject matter such as calculus or American history, attend an early entrance college program instead of attending his or her local high school, enter college at the end of the tenth or eleventh grade without a high school diploma, or be tutored through diagnostic testing and a prescriptive instructional approach (Benbow & Stanley, 1983a, 1983b).

SMPY was not a curriculum development project. The directors of the program decided not to attempt to alter standardized textbooks and courses already in place in the schools. They chose, instead, to work within the better school mathematics curricula and usually in conventional sequence. It would have demanded too much time, expense, and red tape to introduce a new mathematics curriculum for SMPY students. SMPY was not viewed as a service project. It was meant to be a prototype for developing principles, techniques, and practices that could be used in many different contexts to improve the mathematical and other education of "youths who reason extremely well" (Stanley, George, & Solano, 1977, p. 100).

The SMPY group felt that they needed to identify academically advanced students at as early a grade and age level as the developing of the chosen ability, mathematical reasoning, permitted. This led to the selection of junior and senior high school students as their target audience. They chose to follow straightforward identification procedures that relied upon superior scores on such tests as the Scholastic Aptitude Test (SAT). The mathematics (SAT-M) and verbal (SAT-V) subtests were used to measure mathematical reasoning, reading and verbal reasoning, and writing skills. The SAT was found to be an "excellent measure of a student's ability to reason and read well, respond quickly, and perform well under stress" (Barnett, Favazza, & Durden, 1983, p. 40). Students who scored high on the SAT subtests then were administered a battery of cognitive and evaluative measures as further screening procedures. Each student selected for the program was described on an achievement, cognitive, and evaluative profile that was used to project an appropriate educational program.

On the basis of success with over 15,000 gifted young students, Stanley (1976) noted that:

> It should be no surprise that educational acceleration works well when highly able, splendidly motivated students are given a variety of ways to accomplish it... it is clear that acceleration can work much better than so-called academic enrichment for those students who really want it. (p. 236)

Acceleration or Enrichment?

It is commonly recognized that gifted/talented education programs require services or activities not ordinarily provided by the schools (Marland, 1972). Some form of this requirement has been written into the vast majority of state legislation, following the Federal Legislation model, although there are few specific guidelines about how to meet the requirement. Such terms as "differentiated curricula" or "qualitatively different curricula" have been used to describe program options for gifted students, but the practices generally employed are types of acceleration or enrichment. A frequently cited definition of "acceleration" is progress through an education program at a faster rate or at a younger age than the norm (Pressey, 1949). Maker (1986) added a qualification that extends the definition of acceleration by explaining that rapid-

ly paced materials must meet the needs of those students who learn quickly. Her definition of "enrichment" is the teaching of different content or the use of different teaching methods beyond those used in the regular classroom to meet the needs of students with different interests and learning styles. Both acceleration and enrichment are commonly cited as aspects of local gifted and talented programs and both practices have been advocated and criticized.

Stanley (1977) described four kinds of educational enrichment: busy work, irrelevant academic work, cultural enrichment, and relevant academic work. He distinguishes between them on the basis of the focus of attention. "Busy work" consists of having gifted students do a great deal more work in a subject in which they already excel. An example Stanley used often was the mathematically superior student who is required to complete assigned sets of problems even though the student has demonstrated prior understanding of the principles required to solve the problems. "Irrelevant academic work" consists of assigned, high level work that is not based upon specific needs of students. An example would be a special academic course in advanced social studies "or essentially nonacademic work such as games (e.g., chess) or creative training largely divorced from subject matter" (Stanley, 1977, p. 91). Such courses may or may not provide the advanced stimulation brilliant students need. "Cultural enrichment" consists of providing certain types of cultural experiences that go beyond the usual school curriculum. In this category of enrichment, Stanley included learning a foreign language, music appreciation, and the performing arts. He claimed that such courses help prevent boredom but that they do not meet the generalized academic needs of intellectually talented students. "Relevant academic work" consists of assigned tasks that are designed to help talented students improve their work in specific curriculum areas. Often, however, this type of enrichment is not followed consistently across the grades, and students so enriched in an elementary curriculum may be assigned to regular grade level work at the junior or high school levels. This, obviously, would be a poor educational practice; much that would have been gained would be lost. Stanley (1977) wrote that cultural enrichment was justifiable but that the others, without acceleration, "tend to harm the brilliant student" (p. 93).

Enrichment, however, is far more popular in gifted and talented education programs than acceleration. This is because, according to Ellis and Ellis-Schwabe (1986), enrichment programs are easier to carry out in the schools, more likely to be supported by parents and administrators, and offer greater flexibility within programs with normal and gifted students who are in the same classes. Ellis and Ellis-Schwabe also wrote that enrichment provides more time for self-motivation, creative interests, and independence that, they felt, are not nurtured under programs of direct acceleration.

VanTassel-Baska (1986) contended, in defense of acceleration, that it is a highly effective intervention technique that improves motivation, confidence, and scholarship; prevents habits of laziness, allows for earlier completion of professional training, and reduces the total cost of a student's education. Stanley (1977) reiterated similar justifications and added that acceleration programs reduce egotism and arrogance, provide more time to explore careers, create better preparation for advanced study in college, and benefit society by providing more years in a chosen profession and by creating better citizens with improved education. Benbow and Stanley (1983a) also have pointed out that students in an accelerated program are provided greater opportunities to interact with professionals in their chosen field. They, and others, counter the commonly expressed concern that acceleration may have detrimental effects upon students' social development. Research has failed to demonstrate such effects (Daurio, 1979; Pressey, 1949) and failed to justify most of the criticism expressed by educators against acceleration. That it may create skill gaps in core areas has not been proved or disproved; sensitive teachers, however, can correct this problem if it becomes apparent in a gifted student's work.

A major criticism of enrichment and acceleration efforts is that they can be piecemeal or inconsistent across grades. This problem has appeared in many schools and school systems. It is important, therefore, that a gifted/talented education program staff identify and set a philosophy and policies that will be followed with consistency throughout the entire program. Such philosophies and policies would apply to the use of acceleration or enrichment, as well as aspects of the entire curriculum including student identification and desired characteristics, teacher selection and teaching practices and strategies, curriculum content, and educational settings and administrative arrangements.

For the proposed science and art high school for gifted and talented students in Israel, some major philosophical and policy decisions already have been made. Student selection has been set to include the upper tenth of 1% of the nation's students; thus students at the school will be both academically able and gifted in science and art. The setting has been established through selection of a site and a preexisting school plant on that site. Broader aspects of such philosophy and policy decisions have yet to be considered, especially as they bear upon obvious and not-so-obvious differences between science and art students.

Acceleration and Enrichment for Talented Visual Art Students

The decision to focus upon gifted and talented students in science and art draws attention to comparing and contrasting the similarities and differences between educational practices appropriate for these students. In order to initiate newly conceived programs for highly talented students, it is necessary to consider student identification and characteristics, teacher selection and strategies, curriculum content, and educational settings, and how the practices of acceleration and enrichment relate to these areas of decision making. We will attempt to set forth recommendations for educating highly able artistically talented students that are derived from Stanley's and other models in the education of academically able students.

Student Identification and Characteristics

Gifted and talented programs in mathematics and science education use standardized test results, based upon IQ, achievement, and other specific subject matter tests. Universities that enroll gifted, precollege students, such as Johns Hopkins, Duke, Northwestern, and Denver Universities, base their selection upon a national talent search in which a battery of standardized instruments are used for selection of highly able, academically gifted students. Although there are many current school, school district, and community based programs designed to serve the specific needs of artistically talented students, there has been no consensus about recommended identification procedures or instruments for such programs. No publication offers specific guidelines for identification of

artistically talented students based upon the use of standardized tests. There are standardized tests available for testing in the visual arts, such as the Graves Design Judgment Test, Horn Art Aptitude Inventory, and the Meier Art Tests, but these have been shown to have problems and inadequacies for the identification of artistically talented students (Clark & Zimmerman, 1984). Some researchers have claimed that creativity is closely associated with visual and performing arts giftedness and have recommended the use of standardized creativity tests, such as the Torrance Tests of Creative Thinking or Guilford's Creativity Tests For Children, to identify potential talent. It has been demonstrated, however, that creativity, as measured on creativity tests, and various abilities in the arts are separate and only nominally related (Lazarus, 1981).

There are no standardized art tests generally recommended for the identification of students talented in the visual arts as there are for other academic abilities. We, therefore, recommend that a battery of identification procedures be used as the most effective method of identification. These methods might include nonstructured nominations, structured nominations, achievement test scores, academic record, grades in art courses, informal art instruments, portfolio and performance reviews, interviews, and observations (Clark & Zimmerman, 1987).

Successful acceleration programs in academic areas, such as SMPY at Johns Hopkins, have stressed the importance of treating gifted students as individuals, rather than as a group, stressing their individual strengths and needs. Students must be willing and motivated to participate in a program where work will be fast-paced and peers generally will be at their level and above. We have observed similar characteristics in students we work with at the IU Summer Arts Institute, a residential program for students entering seventh through tenth grades who are talented in the visual arts. We have researched the literature about artistically talented students and have outlined numerous claims about observable characteristics of art products and observable behaviors that have been used to describe such students (Clark & Zimmerman, 1984). One of the most salient characteristics of both academically and artistically talented students is their intense interest and dedication to a specific subject matter and their own desire to develop knowledge, skills, and understanding that lead to self-improvement. We therefore believe that art students who will be attending the Israeli science and arts high school should be selected both on the basis of their performance on a selected battery of instruments, their products, and their attitudes and commitment as reflected in their motivation and willingness to participate in an intensive educational program.

Teacher Selection and Strategies

Given the unique population that will be served in the science and art high school in Israel, it appears that a similarly unique set of teachers will be required. It is difficult, however, to describe such teachers; most of what has been written about teachers for gifted students is "armchair speculation" rather than the result of research. A few persons recently have studied this problem and established that artistically talented students need teachers with somewhat different characteristics who use different social and educational strategies than teachers of academically gifted students (Advocate Survey, 1971). The required differences have not been well defined. Obviously, the most critical difference is in a teacher's competence in specific skills and knowledge relative to what is to be taught. Highly selected gifted and talented students in science and art need teachers with as much specific subject matter expertise as possible.

VanTassel-Baska (1986) set forth criteria for selecting teachers and other staff persons to work with an accelerated education program in specific academic subjects. She wrote that not all good teachers can work effectively in an accelerated program and described specific qualities needed for success. These are acceptance and support of acceleration as an educational practice, an ability to modify a curriculum to support accelerated learning experiences, a high degree of knowledge and skill in the content to be taught, and ability to use a variety of instruction management strategies. Similar recommendations are made by Cox, Daniel, and Boston (1985), Maker (1982), and others. Although these recommendations have been set forth for more traditional academic subjects, they apply equally for teachers of the visual arts who may teach in an accelerated program.

In an accelerated program for highly gifted and talented students, the term "teacher" includes those responsible for classroom instruction and others, such as counselors and mentors. All adults who come into contact with students and contribute in some way to their learning must be selected as carefully as possible. Consistent and unitary adherence by all teachers to the program's philosophy and recommended practices is critically important.

Feldman (1980), who studied child prodigies in many areas of expertise, is convinced that all progress in learning is the result of intensive and prolonged instruction and that teachers for highly able students are very knowledgeable about their subject matter and able to select key learning experiences that lead their students to attain mastery level achievement. Bloom (1985) has reported case histories of early achieving, highly talented people in music and art, athletics, and mathematics and science. The history of all of these people included dedication to learning and seeking of a sequence of superior, master teachers throughout their education. Such teachers were able to extend their students' skills, knowledge, and understandings to higher and higher levels of achievement.

Art teachers who will be instructors at the Israeli art and science high school will need substantial knowledge of art making, art history, art criticism, and aesthetics and the sequence in which students come to know these disciplines. As students reach or exceed levels of knowledge, skills, and understanding of their peers and their classroom art teachers, they should be led to study with mentors who are professionals in specific fields relevant to each student's area of interest and talent. As in the Johns Hopkins program, students would best be served educationally and socially if they are able to attend the proposed art and science high school part of the day and study with a mentor or mentors for other appropriate amounts of time.

Curriculum Content

Relatively standard sequences of learning experiences as curricula exist for science, mathematics, music, social studies, and other school subjects. Programs that are articulated across grades follow a scope and sequence organization in such curricula that makes it possible to lead students from relatively naive to relatively sophisticated levels of learning. In the United States, unfortunately, similar curricula organized across all public school grades, do not generally exist for education in the visual arts. Some textbooks with sequenced content have been created recently for elementary schools and junior high schools; at the high school level, there are no complete visual

arts curricula that offer a scope and sequence or articulated curriculum content. There are, however, a few state frameworks for learning in the visual arts, available from states such as California, Ohio, and Wisconsin, that provide bases for visual arts scope and sequence curriculum organization.

This lack of articulated curricula for visual arts education is a problem for at least two major reasons. One is that most writers who address education for gifted and talented students claim that an articulated curriculum is vital for such students (i.e., Cox, Daniel, & Boston, 1985; Feldhusen,1986; Maker, 1982). Another is that providing qualitatively different curriculum, as called for in the Marland report, is not possible without a baseline of standard curricula. Reliance upon art teachers' own resources to define learning experiences for their students, at all ability levels, has led to claims of "enrichment" that are, in fact, simply good education for all students (Center for Instructional Research and Curriculum Evaluation, 1985), thus verifying a criticism often stated by Renzulli (1977).

In 1978, Clark and Zimmerman proposed a curriculum content model to guide decisions about choices of learning experiences in the visual arts at various levels of development. This naive to sophisticated (N-S) model was based upon the assumption that learners enter their studies of the visual arts in a naive, uninformed state and exit in a sophisticated state as a result of teacher interventions and educational activities. Organization of the model was derived from the assumption that activities and results of activities of practitioners working in the areas of art production, art criticism, art history, and aesthetics are appropriate sources to derive content for teaching about art.

Sequences of content in the N-S Model can be used that focus upon important skills and understanding related to the work of artists, art critics, art historians, and aestheticians. Different content strands, based upon analysis of each of the four roles, such as media and skills, concepts and knowledge, critique, and personal style related to work of the artist, are included in the N-S Model. Each of these content strands is used to guide the design of educational activities in a scope and sequence from introductory to mastery level tasks. The N-S Model is generalized and the specificity required to define educational activities related to the work of different artists, art critics, art historians, and aestheticians who take different stances or practice different forms of art are not defined.

For artistically talented students, acceleration based upon the N-S Model means that talented students would move from naive to sophisticated levels of achievement at a more rapid pace than the average visual arts student. The sequence of horizontal stages, from introductory to advanced, related to each of the professional roles, would provide content for educational experiences that outline a program for accelerated learning. Enrichment for artistically talented students would mean the attainment of greater depth of knowledge, skills, and values at any place on the N-S Model than that achieved by average visual arts students (Clark & Zimmerman, 1984, 1986).

Acceleration across a curriculum formulated from a scope and sequence based upon the N-S Model could be used with students interested in study of the visual arts and who have higher level verbal abilities such as those required by art historians, art critics, or aestheticians. Other students interested in the visual arts might focus their study upon art-making abilities required to become artists. At higher levels of attainment, these art students should pursue accelerated study of art criticism, art history, and aesthetics or pursue accelerated studio art classes. As enrichment they also should study related aspects of the visual arts to extend their awareness and understanding within their chosen fields. Students studying studio art at an accelerated level for example, would study art criticism, art history, and aesthetics as forms of enrichment and students studying art history would take studio art classes as a form of enrichment. In addition, students who are highly able and motivated could study all areas of visual arts or areas of science and art at accelerated levels. Clearly, what Stanley (1977) has described as "cultural enrichment" in the education of mathematically precocious youth in the arts and other subjects not normally taught in the schools, becomes primary curriculum content for artistically talented students. A visual arts curriculum that supports student acceleration should be viewed not as a cultural enrichment, but as a content area that has its own integrity as a viable subject of study.

The staff members who will be responsible for creating and coordinating a curriculum in the visual arts for Israel's science and art high school should begin by creating a visual arts framework with articulated and sequential content. Once this is in place, a new curriculum could be created or other curricula could be adapted and modified to fill out the framework by creating specific units and lessons designed to meet the needs of students who are highly talented in the visual arts.

Educational Settings and Administrative Arrangements

No one would argue that high ability science students need access to well equipped, up to date laboratories in which they could explore problems related to those that resemble the work of contemporary scientists. In much the same way, highly talented visual arts students need access to spaces and facilities that resemble those used to educate young artists in colleges or professional schools. Most high school art departments do not have equipment for specialized study. In ceramics, for example, a pugmill for mixing clay, a slab table for rolling out clay, a facility for mixing glazes, and high quality kilns do not exist in most art classrooms at the high school level. Open studios and private work areas encourage self-paced, accelerated learning; therefore work spaces should be made available to students when they are not being used for scheduled instruction.

Students interested in studying art history, art criticism, and aesthetics at advanced levels should have access to professional level books, slides, periodicals, and reproductions that are related to nonstudio aspects of the visual arts. There should be classrooms or independent study carrels that are equipped to facilitate the use of these materials for instruction and study. Gallery shows by students and professional artists and historical or archeological exhibitions are important to provide in a school for highly talented art students. Those studying art criticism, art history, and aesthetics need access to exhibitions of actual art works to practice their skills. Those studying studio art should be responsible for planning and mounting art exhibits and offering their work for public display and critique.

There are many alternatives in educational planning, such as those described by Benbow and Stanley (1983a, 1983b), which have proven appropriate for high ability students. Although these have been used to accelerate the education of mathematically precocious youth, they are equally appropriate for artistically talented students who can be accelerated in an educational program. Administrators of a school for highly gifted students should create a climate in which flexibility and alternatives in program planning are encouraged. Students

should be offered options that include (a) remaining in their school for part of the day and attending advanced art courses at a nearby college or university, (b) taking part in Advanced Placement courses offered in the high school for college credit, (c) enrolling in correspondence courses with college level art content, (d) attending fast-paced art courses in which, for example, 2 years of course work are covered in 1 year, (e) taking advantage of opportunities to bypass course prerequisites by examination, (f) earning full credit for courses by examination, and (g) going to high school only 2 or 3 years and entering college early.

Studio art courses do require certain amounts of time to complete—tasks that cannot be compacted. Students need time to create art works and develop their emerging skills. There is no substitute for practice and time spent in the art studio; this needs to be considered in planning an accelerated program for artistically talented students. Courses by correspondence lack personal interactions between teachers and students, such as critiquing art work in progress, that are vitally important to learning in the visual arts. If at all possible, as students progress to higher levels of achievement in the visual arts, they should be encouraged to attend classes at the college level and study with a mentor-artist so that their knowledge, skills, values, and understandings are developed beyond what would be normally possible at the high school level in a gifted and talented program in the arts.

Just as Stanley began his interest in accelerated learning by advising a student who was precocious in mathematics, we will demonstrate the various means that a student might select who is highly talented in the visual arts. An actual case study will be described of an artistically talented student whose progress we observed and whose choices of options we advised.

Harold: A Case Study

Harold attended the Indiana University Summer Arts Institute for 4 years when he was 10 to 14 years old. During these years, he won awards in several local art contests and was noted as an outstanding art student by his teachers and peers. When he enrolled in his local high school, his accelerated schedule was too full to allow inclusion of an art class. He entered high school at the sophomore level having taken freshman level classes in his junior high school. Harold was an outstanding student in all classes in high school and was selected to attend gifted and talented honors classes in most academic subjects. In addition, he took college courses taught at his high school in calculus and advanced physics.

Figure 1. A self portrait, drawn in pencil, when Harold was 11 years old and in the 6th grade.

Figure 2. A charcoal self-portrait created when Harold was 14 and in the 9th grade.

Figure 3. A pencil sketch drawn of himself by Harold when he was 15 and in the 10th grade.

Figure 4. A tempera self-portrait painting created by Harold when he was 16 and in the 11th grade.

He also played an instrument in the most advanced orchestra in his school and was selected to play in an all-state orchestra concert. In addition, he studied the recorder with a private teacher and performed regularly as part of a Baroque recorder quartet.

On the basis of his superior performance in the classes he attended in the IU Summer Arts Institute, he was allowed to attend a College Credit for High School Seniors painting course offered at IU when he was entering his junior year. This fast-paced class was taught by a college art professor and covered a college semester's content in 3 weeks of intensive studio art work and instruction. In his junior year, Harold decided to study drawing and painting at his local high school. He skipped fundamental classes and was allowed to enter an advanced drawing and painting course where he excelled and was rewarded by winning several local and state art contests.

The following summer, he applied to the Interlochen Center for the Arts summer program to study drawing, painting, and ceramics and to attend a class about Shakespeare's music with a group of highly selected music students. On

Figure 5. When he was 17 and in the 12th grade, Harold painted this dramatic self-portrait.

Figure 6. This masked self-portrait was painted by Harold when he was 17 and in the 12th grade.

the basis of his application portfolio, Harold was awarded a scholarship; after completing the summer program he was offered an additional scholarship to attend Interlochen during the following summer.

In his senior year, Harold requested permission from his local high school to attend IU art classes in the afternoons and high school classes in the mornings. Permission was granted through a waiver and Harold enrolled in four art classes at the college level. These were drawing, painting, and ceramics at advanced, undergraduate levels. During his senior year, Harold was honored for his independent science project titled "Perception and Organization of Color by American and International Students," and was selected as a state winner to attend the International Science and Engineering Fair in Puerto Rico. Two of his art works, shown in the Indiana Scholastic Art competition, received gold keys and two received honorable mentions. Subsequently, one of his oil paintings received a national gold key and one received an honorable mention. Harold is now trying to decide which liberal arts college to attend of the several that have accepted him and offered him scholarships to study fine arts.

The benefits of accelerated and enriched opportunities for study in the visual arts in terms of the student, teacher, curriculum content, and setting become obvious when reading an essay that Harold wrote for one of his college entrance requirements. In response to the request to write about an event that changed his life, he wrote:

> Although I have been creating artwork since I was very young, I consider my initiation into the role of an artist to have taken place during July of 1985. I was attending a summer program at Indiana University called College Credit for High School Seniors and was enrolled in an oil painting class with the wonderfully small number of eight students. We met 3 hours daily and had out-of-class assignments as well.
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> My work was adequate, but I was not satisfied with what I was producing. I felt that I was on the edge of discovering something new about my art work, that I was groping for something that I knew was there, and I discussed this topic with my instructor who told me to persevere.
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> My "breakthrough" occurred exactly at the midpoint of the three week program. I had started a painting of the model and was putting down big color shapes. My teacher came up to me and told me to stop. My proportions were off and she wished to correct them before I really became involved in the painting or else the finished product would turn out badly.
>
> She asked me if she could scratch a few guidelines on the canvas with my palette knife in order to show me what was wrong. I very begrudgingly said yes, even though outsiders interfering with my work was one of my biggest hatreds at that time. She said, "The shoulders are wrong, think of them as a plane, angled this way, see? Think of the hips as a box, with the legs extending out in this fashion. The head is on a neck, connected to a vertical line moving through the torso." Her arm flowed across my half-finished painting in a

quick and graceful way. I was slowly becoming quite angry at her overindulgence, but I held my tongue. "You see, Harold," she was saying, "sketch the chest as a structure, the human body first as a skeleton..." She finally ceased drawing and observed the results of her labors. The painting was a tangled web of chicken scratches, altered beyond comprehension by her enthusiastic hand.

My pulse hammered in my neck. I was really angry at this person who had intruded upon my work. Taking her suggestion, I tried to wipe the surface clean with some turpentine. The paint ran and smeared, and now, full of rage, I threw the painting out. I set up and began a new piece. I painted now to spite her, to show how angry I was. There, a box for the hips; there, a plane for the shoulders tilted in such a way. She was apologizing to me but I was ignoring her, suddenly caught up in this new mode of painting. My brush seemed filled with an electric passion. Too soon, it was time to clean up. I stared at the amazing new work that I had just finished, seeing my released anger and what I knew was perhaps the biggest single step I might ever take in my art work. I had found what I had been groping for.

From that day, my artistic abilities, particularly painting, have steadily increased. Perhaps the most important lesson that I learned from the experience was the idea to never stagnate, never to be afraid to be daring, to risk losing something to try out a new thought. I also learned never to shun what my instructors tell me and to take criticism well, one of the most important aspects of a good artist. I still remember that sunny day in July. I remember telling her that if I was ever to become an artist, it was going to be because of that one day in her class.

On the basis of Harold's successful experience attending IU while he was still a high school student, several local high school students will be attending fine art classes, under the auspices of the Office of Summer Sessions and Special Programs at IU, during their senior year. Recent legislation in Indiana will allow approved students enrolled in eleventh and twelfth grade to attend accredited postsecondary institutions, part-time or full-time, while completing their high school requirements. This legislation provides opportunities that could lead to new opportunities for gifted and talented students to be placed in accelerated programs in the arts and academic areas.

Conclusion

Those in Israel who will design the curriculum for the new high school for students gifted in art and in science will have an opportunity to "tend the spark" and eventually light a great fire that will have repercussions not only for Israeli students' education but for the education of gifted and talented students well beyond Israel's borders. Education in the arts often takes a subservient role to education for precocious students in mathematics and science. Indeed, students who are talented in all subject areas are often directed toward study of science rather than the arts. If staff members at the newly proposed high school are flexible and forward thinking they can create an exciting and challenging program that allows all students to develop their gifts and talents to the highest levels and eventually contribute and "lead Israel's scientific, artistic, and community life."

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