Successful Intelligence and the Gifted

Robert J. Sternberg, PhD
Yale University

During a visit to Jamaica, I had the opportunity to visit several elementary schools in relatively poor areas of the island. The physical layout of the schools was different from that to which most of us are accustomed. The schools were large, one-room schoolhouses. Teachers and their students were arrayed around the room, usually with no partitions separating one class from another. Thus, students got to listen not only to their own teacher’s lecture, but to all the other teachers’ lectures as well. If students had the misfortune to sit near the side or back of the class, the students often could hear another teacher better than they could hear their own. Indeed, it was a challenge to make out what their own teacher was saying.

I found myself reflecting on the problem posed to Alfred Binet, the father of intelligence testing, almost a century ago. If one wished to construct tests to predict school achievement, what kinds of tests might one construct? I decided that, in the Jamaica setting, two of the most useful kinds of test items would measure not skills like vocabulary or arithmetic or spatial visualization—the kinds of things Binet measured—but auditory acuity and auditory selective attention. One needed auditory acuity to hear what the teacher was saying, and auditory selective attention to filter out the teachers whose voices competed with one’s own teacher. The test would probably predict school achievement well, because instruction and even most testing were conducted in the same setting, so that one would need the same skills to do well on an auditory ability test, in the classroom, and on orally administered tests of achievement. Binet was seeking to identify low performers, but perhaps the Jamaican Binet would be seeking to identify high performers. He dutifully might seek out those...
From the President

The Bottom Line

Colleen Elam

Today and tomorrow, each and every child deserves . . .
• to receive individualized academic instruction aimed directly at his or her level at that moment in time;
• to maximize personal strengths and abilities and to shore up personal weaknesses;
• to be allowed and encouraged to proceed at his or her individual pace;
• to be taught by trained, dedicated, professional teachers;
• to learn in the least restrictive and the most nurturing environment;
• to work with the best and most appropriate materials.

In order to achieve this . . .
• the general public must understand and support the benefits of maximizing the potential of every child through individualized education;
• the legislators, administrators, and trustees must perceive first-hand the ramifications of their regulations on real children in real classrooms with real teachers;
• the parents and educators must bond in partnership and trust;
• the community must act together to ensure that everything that can be done is being done to enhance education.

This is an investment in our future. Any compromise is too expensive.

Together, as a community, we can achieve this noble goal.
In this century our educational services have progressed more rapidly than at any previous time in the history of mankind thanks to hundreds of unsung heroes who have dedicated their lives to children and education.

Thank you to all of you teachers who have poured your hearts and your souls into your teaching. Thank you for your late hours, your unwavering devotion, and your personal sacrifices. Thank you for looking into the faces of your precious charges and recognizing their individuality and discerning their needs. Thank you for caring. Thank you for teaching.

(see ELAM, page 30)
Executive Director's Update

Bridging the Past and the Future

Connie McLendon

It was 10 years ago this September that I wrote my first column for Tempo. Looking back, I recall what concern I had about that first communication. I really struggled to find words that would let the membership know that I could be counted on to lead the organization in its mission for gifted and talented students. Though great at the time, my anxiety was tempered by an eagerness to begin work. The experience would turn out to be the professional ride of my life.

The year was 1989. I was succeeding Laura Allard as executive director of TAGT—that alone a daunting task. Laura and Texas’ first director of gifted education Ann Shaw, supported by the TAGT membership, only recently had maneuvered passage of the gifted education legislation—a feat of considerable consequence I would learn in the years that followed. With Laura’s retirement in 1989 and Ann’s only a few months later, it fell to me, still new to the job, the responsibility of advocating the development of rules and guidelines for local districts to begin implementing the gifted education mandate by school year 1990-91. Much easier said than done!

Suffice it to say that my first two years with TAGT were fraught with one political challenge after another. Texas Education Agency (TEA) staff and the TAGT leadership collaborated on developing the rules and rewriting sections of the state plan to conform to the gifted education mandate. Both the rules and the state plan were scheduled for adoption by the State Board of Education (SBOE) in the fall of 1990. Over a period of several months, TAGT was called on repeatedly to testify on the rules and the state plan before each was finally adopted in 1990. The State Board readopted the rules in 1991—which required more testimony—and again in 1996, necessitated by the gifted accountability legislation in Senate Bill 1, from 1995.

As we approach the new millennium, the need for a strong and courageous TAGT will be greater than ever.

Déjà Vu . . . SBOE Reviews Rules for Gifted

The year is 1999. I am in the waning months of my tenure with TAGT; once again, we are approving State Board rules for gifted education. Texas law requires a four-year sunset review cycle for all state agency rules; therefore, gifted/talented rules are up again, the last adoption being in May, 1996. The review of 19 TAC Chapter 89, Adaptations for Special Populations, Subchapter A, Gifted/Talented Education, will be presented for adoption at the November, 1999 SBOE meeting. The 1996 rules were used as the foundation of the Texas State Plan for the Education of Gifted/Talented Students. Approved in 1997, the State Plan represents a major milestone in gifted education, forming the basis of gifted program accountability established by Senate Bill 1. Current rules have been used for two years on District Effectiveness and Compliance (DEC) monitoring visits to assess services for students in gifted education programs. With the most frequently cited indicator in gifted education being the one relating to the hours of professional development required for teachers of the gifted, TAGT is recommending a change in current rule for the November adoption.

More significantly, reports from DEC monitoring of all programs for the past two years show that G/T 17 (the g/t teacher training indicator) is the second most frequently cited indicator overall. Furthermore, reports from the field indicate that monitoring visits have resulted in improvements in those programs scheduled for DEC visits. Thus, TAGT, in collaboration with TEA, is recommending that the minimum 30 hours of training for teachers who are responsible for providing services that are part of a program for gifted students must be completed prior to providing services in the program. A teacher without the 30 hours would have one semester to complete the required training. Until such time as the state may require professional certification of teachers of gifted/talented students, as it does now for teachers of other special populations, the 30 hours

(see MCLENDON, page 31)
In Praise of a Mighty Builder

In an article I wrote in 1997 reflecting on the past twenty years of gifted education in Texas, I recalled a story in Oakley and Krug's *Enlightened Leadership* about three men laying brick at a worksite. In interviewing the three men about their jobs, the first man stated he was laying brick and the second man said he and other construction people were putting together the east wall of a structure. However, the third man being interviewed said, "I'm helping to build a cathedral, and someday right where we are standing, the spires will rise high above us, and people will be meeting to worship and be educated."

For the past ten years, the Texas Association for the Gifted and Talented has been fortunate to have a cathedral builder at the helm, or as authors Oakley and Krug describe them, one who “has bought in people to be their very best. When you are in her company, you know you are seeing ‘style’ in action.

Because of her capability to assess the needs of TAGT and to recognize those who possessed the necessary qualities of leadership, she led TAGT in designing a strategic plan, and she saw that the officers and Board could execute the plan. She enlisted the help of leaders in many fields, including legislative members, to assist in this vision, thus gaining for TAGT the respect it commands today.

While accomplishing these complex tasks, she never forgot the human factor, the sincerity, if you will, that must be present if you are to lead others to support your cause, and to do so comfortably. The sincerity of her passion for meeting the needs of gifted/talented students is a part of her being and its glow has inspired many of us to work even harder.

We have been blessed with the presence of Connie McLendon, our Executive Director, as our builder.

Ten years ago, upon the retirement of our first Executive Director, many of us wondered not only who could take her place, but who would have the vision to lead us effectively into what would be unchartered territory. As a member of the search committee for a new executive director, I remember how impressed we were as Connie unfolded for us the ways in which she saw the organization growing and becoming more sophisticated. Today, as I reflect upon our recommendation to the Board to acquire her services for the organization, I don’t think there was one member of that committee who even dreamed that she would really lead the organization in the next decade.

Connie McLendon is the type of person who did dare to dream, who saw that we really are building an awe-inspiring cathedral which thanks to her will be viewed with the style, respect, and sincerity it deserves. She has done this because Connie herself is the epitome of style, respect, and sincerity.

The words “gifted and talented” can sometimes be difficult to define, yet we all know when we have met a “gifted” person; so it is with the word, “style.” Upon your first meeting with Connie you know you are in the presence of someone with impeccably good taste, someone who encourages people to be their very best. When you are in her company, you know you are seeing “style” in action.

As Connie prepares to retire from her position, certainly we will all feel the loss of her day-to-day presence. Yet, let us learn from our wonderful cathedral builder. Let us look at the bricks made walls that inspire us and others to view our structure with the respect, warmth and sincerity it so richly deserves. This is not the time to look downward or to merely see bricks or walls, but it is the time to look upward at this magnificent piece of construction and to continue to share the vision of what it ultimately can become.

Connie, we thank you for sharing your vision with us. We will remember all your strengths and we will hope to continue growing our structure with style, warmth, and sincerity so that our goals for the gifted and talented may be met.

You are simply, “not simplistically,” the best!

Wayne Craigen is a Past-President of TAGT. He is currently Coordinator of Advanced Academic Services for Austin Independent School District.

Wayne Craigen
Past-President of TAGT
The Role of Authentic Learning in Developing Gifts and Talents: *A How-To Guide*

Joseph S. Renzulli

One of the goals of gifted education is to provide young people who display superior interests and potentials with opportunities to apply past and present learning to real life situations. The acquisition of advanced levels of knowledge, higher order thinking skills, and the investigative techniques of the practicing professional take on relevance and true meaning when young people can actually apply these skills to problems they consider to be personally meaningful. I call this kind of experience authentic learning, and through a vehicle called enrichment clusters, a set of guidelines has been developed to help teachers organize these kinds of experiences for small groups of students. We have experimented with the enrichment cluster concept in a variety of elementary and middle schools, many of which serve economically diverse student populations. Our research found that with a relatively small amount of training, much of which is reflected in the guidelines that follow, teachers developed learning experiences that go beyond the didactic or acquisition-of-information model that is so prevalent in general education. Our research also found that challenging content, authentic methodologies, and advanced thinking and problem solving strategies were used by the vast majority of teachers who applied this method for promoting the gifts and talents of young people (Reis, Gentry, & Maxfield, 1998). Before describing the steps for developing an enrichment cluster, a brief discussion will deal with the age old question of what makes a problem real, and the role that real problems play in authentic learning.

**Authentic Learning and Real-Life Problems Defined**

Two key concepts that define authentic learning are application and real problems. Authentic learning consists of applying relevant knowledge, thinking skills, methodological techniques, time management strategies, and interpersonal skills to the solution of real problems. In order for a problem to be considered a real-life problem (as opposed to a prescribed, presented problem) it must have four characteristics. First, a real problem requires a personal frame of reference for the individual or group pursuing the problem. In other words, the problem must involve an emotional or internal commitment in addition to a cognitive or scholarly interest. For example, stating that global warming or urban crime are “real problems” does not make them real for an individual or group unless they decide to do something to address the problem.

A second characteristic of real problems is that they do not have existing or unique solutions for persons addressing the problem. If an agreed-upon solution or prescribed strategies for solving the problem exist, then it is more appropriately classified as a “training exercise.” Even simulations based on approximations of real-world events are considered training exercises if their main purpose is to teach predetermined content or cognitive or affective processes. The same is true for thinking skill exercises or activities that are called “problem based learning,” if such activities begin with a teacher or text book selected problem and/or they have a relatively established plan of attack for problem resolution.

The principal goal of education is to create men and women who are capable of doing new things, not simply repeating what other generations have done.

—Jean Piaget

The third characteristic of a real problem is best described in terms of why people pursue these problems. The main reason is that they want to create new products, services, or information that will change actions, attitudes, beliefs, values, or appreciations on the part of a targeted audience. For example, a group of young people who gathered, analyzed, and reported on data about television-watching habits in their community were contributing information that was new; at least in a relative way, and that would cause people to think critically about the television-viewing actions of young people.

The final characteristic of real problems is that they are directed toward a real audience. Real audiences consist of persons who voluntarily attend to information, events, services, or objects. A good way to understand the difference between a real and a contrived audience is to reflect on what one group of enrichment cluster students did with the results of a local oral history project dealing with the “biographies” of historically significant buildings in their town. Although they presented their findings to classmates, they did so mainly to rehearse presentation skills. Their authentic audience consisted of members of a county historical society and persons who chose to read about their research in the features section of a local newspaper.

To understand the essence of authentic learning is to compare how learning takes place in a traditional classroom with how someone might learn new material or skills in real-world situations. Classrooms are characterized by relatively fixed-time schedules, segmented subjects or topics, predetermined information and activities, tests and grades to determine progress, and an organizational pattern largely driven by the need to acquire and assimilate information and skills imposed from outside the classroom.

Contrast this type of learning with the more natural chain of events that takes place in real-world situations including research laboratories, business offices, or film studios. In these situations, the goal is to produce a product or service. All resources, information, schedules, and events are directed toward this goal, and evaluation (rather than grading) is a function of the quality of the product or service as viewed through the eyes of a client or consumer. Looking up new information, conducting experiments, analyzing results, or preparing a report is focused primarily on the present rather than storing it for a distant future. And it is these more enduring structures that have the greatest amount
of transfer value for future use. When content and processes are learned in authentic, contextual situations, they result in more meaningful uses of information and problem-solving strategies than the learning that takes place in overly structured, prescribed classroom situations. If persons involved in authentic learning experiences are given some choice in the domains and activities in which they are engaged, and if present experience is directed toward realistic, personalized goals, this type of learning creates its own relevancy and meaning.

**THE ASSEMBLY PLANT OF THE MIND**

Authentic learning consists of investigative activities and the development of creative products in which students assume roles as first-hand investigators, writers, artists, or other types of practicing professionals. Although students pursue these kinds of involvement at a more junior level than adult professionals, the overriding purpose is to create situations in which young people are thinking, feeling, and doing what practicing professionals do in the delivery of products and services. These experiences should be viewed as vehicles through which the following five objectives can be achieved:

- To provide students with opportunities, resources, and encouragement to apply their interests, knowledge, thinking skills, creative ideas, and task commitment to self-selected problems or areas of study.
- To acquire advanced-level understanding of the knowledge and methodology used within particular disciplines, artistic areas of expression, and interdisciplinary studies.
- To develop authentic products or services that are directed primarily toward bringing about a desired impact on one or more specified audiences.
- To develop self-directed learning skills in the areas of planning, problem finding and focusing, organizational skills, resource utilization, time management, cooperativeness, decision making, and self-evaluation; and
- To develop task commitment, self-confidence, feelings of creative accomplishment, and the ability to interact effectively with other students and adults who share common goals and interests.

Authentic learning should be viewed as the vehicle through which everything, from basic skills to advanced content and processes "comes together" in the form of student-developed products and services. In much the same way that all the separate but interrelated parts of an automobile come together at an assembly plant, so, also, do we consider this form of enrichment as the assembly plant of mind. This kind of learning represents a synthesis and an application of content, process, and personal involvement. The student's role is transformed from one of lesson-learners to first-hand inquirer, and the role of the teacher changes from an instructor and disseminator of knowledge to a combination of coach, resource procurer, mentor, and, sometimes, a partner or colleague. Although products play an important role in creating authentic learning situations, a major concern is the development and application of a wide range of cognitive, affective, and motivational processes.

**ENRICHMENT CLUSTERS**

As indicated earlier, our experience with schools has shown that we can guarantee authentic learning experiences for students if the overall weekly schedule devotes some time focused exclusively on the kind of learning just discussed. During enrichment clusters, non-graded groups of students come together for approximately one-half day per week because they share common interests that bind them together. They also share a willingness to work cooperatively within a relatively unstructured learning environment that does not have a pre-planned set of lesson plans or a unit plan. Information collected in student portfolios (Purcell & Renzulli, 1998) assists students in making decisions about the general area(s) in which they might like to work.

**How It Works**

The guidelines for enrichment clusters are easy to follow.

First and foremost, all cluster activity is directed toward the production of a product or service.

1. **How-To** books that provided valuable sources of methodological information. Brainstorming and webbing techniques helped students identify what they knew and what they were eager to discover. Mutual interests are a good starting point for accelerating motivation and promoting harmony, respect and cooperation among group members. Individual interests led to students interviewing local professionals and obtaining career-related literature from professional societies and associations. Resource people ranged from teachers and students involved in a local community-college communications program, to professionals at the local television station.

*Initial Questions*

The initial meetings of the Video Production Company focused on answering a series of the key questions raised by practicing professionals in any field (see page 22a). Rather than providing students with answers to these questions, the teacher organized and guided but did not dominate the exploration process. General exploratory experiences took the form of guest speakers, displays of typical products from the field of video production, and videos of cinematographers at work who describe the products and services that characterize the field of study. A library trip organized around a scavenger hunt helped students broaden their perspective about the products and process involved in different genres of video production.

Students discovered "How-To" books that provided valuable sources of methodological information. Brainstorming and webbing techniques helped students identify what they knew and what they were eager to discover. Mutual interests are a good starting point for accelerating motivation and promoting harmony, respect and cooperation among group members. Individual interests led to students interviewing local professionals and obtaining career-related literature from professional societies and associations. Resource people ranged from teachers and students involved in a local community-college communications program, to professionals at the local television station.

Once students understood what professionals in video production...
As the facilitator of the cluster, the teacher helped students select challenging projects, develop story boards and shooting schedules, and make arrangements for transportation and cooperation with other teachers. As the facilitator, the teacher helped students select challenging projects, develop story boards and shooting schedules, and make arrangements for transportation and cooperation with other teachers. She also helped identify the jobs to be done, obtain the required resources, and develop an action plan. The teacher worked with the group on developing interpersonal skills, running effective meetings, and developing time-management skills. These activities should be student-driven, with the teacher playing an advisory role.

Wherever possible the teacher should encourage students to imitate the roles and responsibilities modeled by actual professionals working in the field of video production. This division of labor allows all students to have ownership of a component of the production and to find a niche that complements their individual abilities, needs, and interests. Each person's specialty is valuable because of the essential contribution it makes to the whole.

At all times the role of teacher is to coach, support and escalate the level of the performance to a higher level. Like any coaching position, teachers will quickly develop the experience to predict the problems and needs of the group before they arise. This requires a great deal of patience and restraint. Facilitators must allow students to experience frustration and struggle to turn setbacks into successes. Students must own the problem if they are ultimately to own the satisfaction of their success. As the work of the Video Production Co. evolved, the teacher helped students run company meetings and assess their progress.

Assessment and evaluation are integral parts of product development, but evaluation should not be imposed from outside. Students should select criteria that they feel are important and judge their work against them. Assessment should be reflective, and the enrichment cluster should provide an atmosphere in which students feel comfortable taking creative risks. Product development should always be viewed as "a work in progress," and feedback should be used to improve the quality of the product. The ultimate evaluation is always a function of viewer feedback. When a product is complete, time should be taken to celebrate its success before moving on to the next project.

Two Key Issues in Developing Enrichment Clusters

1. Enrichment Clusters Are Not Mini-Courses!
One of the major problems we have encountered in our research on the enrichment cluster concept is a tendency on the parts of some facilitators to turn the clusters into mini-courses. Mini-courses are designed to teach a prescribed set of content or thinking skills to students. They may differ from regular instructional units in that they deal with topics not ordinarily covered in the regular curriculum, and they may use teaching strategies that are different from traditional recitation, drill, and testing practices. The ultimate purpose of a mini-course is to "put into the heads of students" a pre-selected set of content and/or process objectives. While this is not an unworthy goal (indeed, such is the make-up of most school learning experiences), we have something different in mind when it comes to the central purposes of an enrichment cluster.

An enrichment cluster is a learning situation that is purposefully designed to produce a product or service that will have an impact on an intended audience. All learning that takes place within a cluster, whether that learning is new content, new or improved thinking processes, or new interpersonal skills is what John Dewey called collateral learning. In other words, students learn new material within the context of a real and present problem. We purposefully avoid pre-specifying content or process objectives because we want students to follow the investigative methodology of practicing professionals in the real world. If we approached clusters by pre-specifying what and how students are going to learn, we would be returning to teaching practices that are typical of regular instruction.

Planning an enrichment cluster is, in many ways, an easier and more natural process than planning for traditional teaching. We need only determine (through discussions with students) a product or service and an intended audience, and then take the steps necessary to acquire the resources and know-how needed to produce the product or deliver the service. Whatever information, materials, problem solving skills, or assistance we need automatically becomes relevant because we require it to produce the product or deliver the service. Imagine for a moment all of the things about arithmetic, geometry, geography, architecture, purchasing, aesthetics, computer graphics, advertising, photography, accounting, cooperativeness, leadership, and ornithology that we require it to produce the product or deliver the service. Imagine for a moment all of the things about arithmetic, geometry, geography that we require it to produce the product or deliver the service. Imagine for a moment all of the things about arithmetic, geometry, geography that we require it to produce the product or deliver the service.

Although enrichment clusters are modeled after natural (non-school) learning, a good deal of our teacher training taught us that we must begin by "first stating our objectives and learning outcomes," and then "design lessons to achieve these objectives." This traditional approach to pedagogy is a difficult habit to break. We hope that the suggestions that follow will serve as a guide for using an inductive approach to pedagogy rather than the prescribed/presented approach that typifies most regular curriculum and mini-course activities.

2. Hands On Should Not Mean Brains Off!
A second problem we encountered in our research on enrichment clusters is a failure on the parts of some facilitators to escalate the level of knowledge pursued within a cluster. We have observed many exciting, fun-filled activities, and this kind of enjoyment of learning is unquestionably one of the most desirable features of a good cluster. At the same time, some critics have said that certain clusters are nothing more than "fun-and-games," and others have said that the clusters are "soft on content," that they don't represent "real school." We can guard against these criticisms by examining each cluster with an eye toward what constitutes authentic and rigorous content within the field or fields of study around which the cluster is organized. For example, in the cluster on bird houses and feeders mentioned above, the teacher/facilit...
Toward the Next Generation of Programming for Talent Development

As we approach the millennium, we have the opportunity to begin working on a new vision for education for talent development. We can (and surely must) appreciate and learn from nearly three decades of theory, research, and practice. But just as certainly, we must also be alert to new opportunities, challenges, and directions. In preparation for the “next generation” of education for talent development, we must continue to engage in careful planning and on-going review and evaluation. In addition, we will need to make explicit commitments to both continuous improvement (doing better the best of what we are already doing) and innovation (doing what we have not previously done). Exemplary programming for the millennium will not come about by chance, nor by inertia.

What basic principles and convictions might shape and guide our efforts for the improvement and innovation challenges ahead? The following statements represent possible “fundamental tenets and beliefs” (adapted from Treffinger, 1989; Treffinger & Feldhusen, 1997; and Treffinger, Young, Nassab, & Wittig, in preparation). We hope they will provide a starting point for discussion, reflection, and research on which sound programming might be based in the future. We invite your responses, and we would look forward to opportunities for discussion and exploration of these principles and their implications.

1. All students have worthwhile potentials and interests. Appropriate and challenging instruction can lead to significant achievement and satisfaction in at least one (or often more) talent areas for many students. Talents exist and may be expressed and developed in many important worthwhile domains.

2. Some students show advanced levels of talent and accomplishment very early in their lives. With sustained effort, encouragement, and support, many students will continue to pursue the development and expression of their strengths and talents and thus may eventually attain a very high level of excellence and accomplishment.

3. Talent development is lifelong and fundamental to personal growth and healthy development. As children mature, previously unrecognized strengths and talents (“hidden potential”) often emerge and talents may also become more specific, focused, and sustained.

4. New opportunities enable talents and interests to change, grow, or emerge over time. We can affirm talent when we see it, but we should not declare that it does not exist if, at any single instance, we do not see it. (Lack of evidence now is not necessarily evidence of lack forever)

5. Creative productivity, which occurs through both individual and group efforts, is commonly manifest by quality products that are shared with appropriate audiences.

6. Moving toward creative productivity in any domain involves a constant struggle for balance between playfulness (openness to experience, a sense of curiosity, and exploration, risk-taking, and “toying” with possibilities) and rigor (disciplined inquiry, hard work, and extended effort).

7. A person’s learning style provides powerful information about how her or his strengths and talents can best be expressed and used and also provides a basis for “appropriate and challenging” instruction.

8. Nurturing talent potential is far more important for educators than simply categorizing, labeling, or sorting.

9. Talent development occurs in an “ecosystem of development.” Appropriate and challenging programming occurs in settings or through agencies outside the school and requires the commitment and support of the home and community as well as the school.

10. Home, school, and community all contribute to deliberate efforts to recognize students’ emerging strengths, talents, and sustained interests. We must be talent spotters in order to become talent developers.

11. Participation in activities or experiences in which various talents can be expressed and used can be effective starting points for talent recognition and development.

12. Talent development requires significant personal ownership and investment, sustained effort, discipline, commitment, and work ethic on the part of the individual as well as resources, support, and encouragement from others.

13. Effective programming for talent development involves many and varied resources and levels of service. These support, extend, expand, or enhance, rather than supplant, the daily school program.

14. Appropriate and challenging educational experiences are fundamental responsibilities of the school, not “privileges” or special activities.

15. Programming activities in six areas (individualized basics, appropriate enrichment, effective acceleration, independence and self direction, personal growth and social development, and career preparation with a futuristic outlook): appropriate and challenging services in any of these areas often cross traditional subject or grade level designations.

16. Talent development in the school setting requires the commitment and support of a broad cross-section of staff, adequate professional time for deliberate and explicit planning, and recognition of need for and importance of gradual implementation over several years.

17. Recognizing and documenting all students’ strengths, talents, and sustained interests is a flexible, on-going, and inclusive process, not a “one time event.”
Creativity: In the Classroom and Beyond

Karen Meador

Are you a creative thinker? Tempo readers will likely respond with a resounding YES, but this may not be the case with some other audiences. A person may say, “No, I’ve never been good in art,” or “No, I just like to listen to music.” These indicate the probability that many people have a limited definition of creative thinking. This article expands upon these limited definitions while discussing the importance of creative thinking in people’s professional lives and uses this as a premise for encouraging students to think creatively in all core contents. Foundation information regarding creativity in the workplace is derived from a review of literature and interviews conducted by the author. The interview data illuminates the importance of both convergent and divergent thinking in the creative process. Teachers can share this information with students when discussing the value of learning and applying creative thinking. Examples of creative thinking in content are also provided.

Creative Thinking at Work

• Basic Skills
Creative thinking is vital in the workplace regardless of the occupation. The literature on basic skills needed in the workplace makes a strong case for the importance of creative thinking. The American Society for Training and Development (Carnevale, 1990) included creative thinking/problem solving as a basic skill that enables workers to be flexible and to adapt to varying situations in the workplace, and Kerka (1990), who identified job-related skills that employers want, includes creative thinking and problem solving among seven important basic skills. The Oklahoma Department of Vocational and Technical Education (1995) even infused creativity into recommended pharmacology curriculum for practical nurses.

• Research About Creative Thinking
Doctors, engineers, and other professionals also benefit from creativity. A 1983 report by medical schools, colleges, and academic societies (Association of American Medical Colleges) suggested that medical students were not well prepared to apply critical, analytic abilities to problem-solving. It is possible that strides have been made to improve this situation in the last sixteen years, and that medical students are currently better prepared in this area. The ability to think creatively is also important for engineers, who often solve critical problems. Problem-solving is a major component of many engineering programs, such as one at Rice University in which students in 1993 built and improved upon the functions of a basic prosthetic arm. Wong and Swan (1984) discussed training for Papua New Guinea undergraduates in engineer-

Yet, there is still a need for all teachers to look beyond basic principles of fluency, flexibility, originality, and elaboration toward the application of these components at a qualitatively different level.

Interviews About Creative Thinking
Several interviews were conducted to gather current information about how people use creative thinking at work, and two definitions of creativity guided the analysis of the interview data. Parnes (1970) defined creative behavior “as that which demonstrates both uniqueness and relevance in its product (p. 6),” and Amabile (1989) stated “a child’s behavior is creative if it is novel and appropriate (p. 5).” Both definitions attest to the importance of divergent and convergent thinking within the creative process. Fiebig (1993) reiterated this and stated “for many years the misinterpretation has been that creativity is divergent production only. . . Effective creative processes must have the appropriate convergent technology to harness valuable divergence” (pp. 268-269). The interview analysis that follows recognizes the use of convergent and divergent thinking in the creative process.

Those interviewed included an architect, an artist, a computer software developer, a computer business systems consultant, and a manager for a large manufacturing company. All those interviewed entertained similar questions regarding whether they use creative thinking at work, when it is used, and how restraints on creative thinking affect productivity. While the small sample is not sufficient to draw reliable conclusions, the information is interesting and supports the premise that creativity is important in many occupations.

All five people interviewed indicated that creativity is important in their work and discussed specific examples of how they use it. The computer software developer talked about how a typical assignment is to “design a computer program, or part of one, that meets a set of functional specifications, within a certain deadline.” The computer consultant said a system that he designs might streamline a given business process, such as how to ring up customers in a restaurant to provide more efficient service and save money for the company. The creation of both products requires careful consideration of the “problem,” generation of new program or system possibilities, and selection of an acceptable solution. The architect and the artist also develop products. The architect’s job requires creative thinking through problem solving and conformity since creative thinking must be directed at a particular task, and the artist uses it in numerous aspects of his work. The manufacturing manager applies the creative process to create change within
his sector of the business and acknowledged that one of the three major goals for the company is innovation. Yet his use of creative thinking does not end with the development of an innovative idea for change; it continues when he must convince others in the company to accept that change. The computer consultant discussed the same thing when stating that the most creative part of his job comes when he has to figure out a way to get those who are "predisposed against the product" he is trying to add to their system to "embrace the change . . . , accept the product, and create a successful implementation." For example, he used creative thinking in training employees at a large cafeteria chain who were not overly excited about their new computer system. The consultant used “hands-on” contests to make using the new system fun and refined reports coming from the system so that they showed key performance indicators such as how many customers were run up by the checker in a 15-minute period.

Those interviewed discussed instances when they use convergent thinking as part of the creative process to stay within the boundaries or rules of a given work situation. One of these boundaries involves satisfying customer or business needs, and all those interviewed discussed the need to create results that people appreciate and products they want. For example, the artist expressed both his need to create pieces that will sell and the importance of meeting timelines.

Another boundary for creative thinking involves being true to personal perceptions of the art or craft. Both the artist and the architect indicated that they impose their own rules on creative thinking. The artist discussed creating pieces in groups that had something in common, and the architect talked about the need to pull multiple elements of nature and design into a pleasing whole. These two people differed from those interviewed who work in manufacturing and consulting by appearing to be as concerned with their own product satisfaction and how it represents their field as with the need to please a customer.

Boundaries or rules had mixed effects on those interviewed. For example, some discussed their feeling frustrated or stifled when customers or other employees reject products and suggestions, resulting in modification of their creative ideas. One person felt that the customer's adverse reaction to new modes of operation require a return to archaic operations. Another indicated a similar problem when colleagues in the business were "set in their ways." On the other hand, the artist and the architect discussed how the boundaries of their work that require convergent thinking helped them focus on the task and challenged them. They appeared to gather strength and determination from them as though following their own rules propelled them into using more advanced creative thinking.

Creativity at School

Examples
The preponderance of evidence regarding the importance of creativity in the workplace naturally leads to concern for facilitating the development of creative thinking among students. They do not have to be musicians, artists, dancers, or actors to need to develop creative thinking. Piirto (1994) asserts that "creative thinking is currently called an ability that is separate from talent in specific domains such as visual arts or writing or music (p. 153)." Some children naturally realize its importance and use creative thinking to survive in school or while completing after-school jobs. A fourth grader, for example, created fictitious situations involving numbers and solved problems in her mind while waiting for the other students to complete math assignments that she quickly finished. A high school student who was bored as he worked at the grocery store, created a system for keeping track of the types of cars driven by people who gave tips and drew conclusions based on the data. Both of these examples demonstrate how students used creative thinking to handle their personal need to keep from being bored. Other students demonstrate creativity in academics by presenting a project display or report in a unique manner. Teachers need to encourage creative thinking that is qualitatively different from these examples. This will be more thoroughly discussed later in this article.

• Processing Styles and Examples

Tardif and Sternberg (1988) summarized information taken from various chapters of Sternberg (1988) and identified processing styles used by creative individuals. These are used to organize the examples of creative thinking in content that follow. These processing styles include “using wide categories and images of wide scope, a preference for nonverbal communication, building new structures rather than using existing structures, questioning norms and assumptions in their domain . . . , being alert to novelty and gaps in knowledge, and using their existing knowledge as a base for new ideas (p. 435).”

Traditionally, teachers recognize at least three of the above mentioned processing styles in a creative thinker: using their existing knowledge as a base for new ideas, building new structures rather than using existing structures, and exhibiting a preference for nonverbal communication. At a minimum, these styles manifest themselves in the development of unique products, presentations, and/or displays of information. The examples in figure 1 (page 24) illustrate ways other creative processing styles may be tapped in the classroom.

Student researchers of any age practice thinking creatively as they investigate topics. They may initiate novel ways of gathering information such as going to a nursing home to talk with elderly citizens about a long-existing problem with the county water system and comparing this information with old newspaper articles located on microfilm in the library. While working with information gathered, a student may discover a gap in his or her knowledge about the topic, such as years unaccounted for in a chronologically organized report, and develop a unique means to garner needed information.

• Suggestions for Teachers

Some educators are sophisticated in their knowledge about creativity and recognize its manifestation by students in multiple forms and contents. Yet, there is still a need for all teachers to look beyond basic principles of fluency, flexibility, originality, and elaboration toward the application of these components at a qualitatively different level. Additionally, it is important to learn about other factors that contribute to creativity, such as personality traits, so that these may be encouraged and facilitated in the school. Following exploration of creativity at a complex level, teachers may want to work with colleagues in their discipline to determine how to facilitate student development of creative thinking in content. While a creativity expert can help educate teachers about creative theory and processes, the teacher is the content expert in the classroom, and he or she must apply this knowledge.

Conclusion
This article makes a case for imbedding creative thinking in the legitimate curriculum of all contents. The information provided regarding creativity in the workplace can be used to educate students about the importance of creative thinking, and the discussion on creativity at school provides examples of the creative process at work in content. Hopefully all of the information provided will encourage readers to examine the complexity of creative thinking, to recognize it in themselves and students, and to value it to the extent that its development is mandated in every classroom and every discipline.

(see MEADOR, page 24)
Creative Ways To Identify Young Gifted Children (K-3)

I magine for a moment a nursery of seedlings, in which the gardener in charge only waters and feeds the plants at specified times. Those that rise higher than the others may draw the attention of the gardener and receive extra water, but many others that look somehow “irregular” or unusual may never receive that special care. Like rare seedlings, young gifted children need special nourishment and an environment where their unique attributes can develop. Yet what most often happens is that only the students with obvious talent receive the attention they need, while those whose strengths appear inconsistently or in less conventional ways are neglected. It is with these rare seedlings that this article is concerned.

LOOK FOR TRAITS AND BEHAVIORS
One of the reasons that many school districts in the U.S. do not offer special services for young gifted children (K-3) is the difficulty in measuring ability in the early grades. For young children, physical, social, and cognitive development is rapid and variable. Cognitive and motor skills come suddenly; one moment the skill is not observable, then it miraculously appears. This is why the attempt to identify gifted children in a controlled setting where the process occurs in a fixed period of time (such as testing or performance in a single class assignment) can only be considered a minimal estimation.

The fairest way to find gifted children in the early years of school is to look for particular kinds of behaviors and characteristics and to look for them over an extended period of time. This way, you will not miss students whose gifts are less obvious (in the academic sense) and those who, for reasons of ethnicity, language, or economic level, do not exhibit talent openly. Recognizing gifted behaviors in a classroom of young, enthusiastic, endlessly active and curious children is not an easy task. So many behaviors are evident at once that it may become difficult to isolate them or to decide if they are greater than the norm.

I always encourage teachers to begin their talent search by enlisting the aid of parents. Since about 80% of the parent population can identify their children’s giftedness by ages five or six, a short cut to finding these students is to consult with them. Although parents are certainly biased in their judgments of their own children, they have had years of authentic first-hand observations that teachers can draw upon. Creating a checklist for parents can be a useful beginning to a lasting, mutually beneficial relationship. In the checklist below, I have included a number of items from a parent checklist in a book I co-authored called Teaching Young Gifted Children in the Regular Classroom (Smutny, Walker, & Meckstroth, 1997) and added some additional items to include children from other cultural and language groups.

Sending a welcoming letter of introduction and a checklist to parents at the beginning of the year will save a great deal of time and give you some guidance in your talent search. You can also use the list on the following page for your own use in the classroom.

LOOK FOR SENSITIVITIES
Besides academic, creative, and physical behaviors, there are also sensitivities of young gifted children to consider. A few items on the checklist allude to their sensory responsiveness. Gifted children absorb their world through every pore. The world bombards their eyes, ears, nose, and taste buds with multiple and complex sensations. The beauty of trees flowering and birds gathering in a flock awes them; blaring sounds from the street assaults them to their bones; the music coming from their mother’s radio makes them want to leap around the room, while the percussive sound of feet pounding the pavement or pelting rain on the roof inspires an imaginary game in their minds. They also love the feel of things—bread dough squishing through their fingers, grass rubbing against their cheek, the rough edge of a tree trunk. They love the sweet spice smell of baking gingerbread and the warm smoky smell of a fireplace on a cold evening.

Along with sensory stimuli young gifted children also respond empathetically to the people and other living beings around them. They sense the joys, pains, sorrows, and hopes of family members, friends, and classmates and sometimes feel sad when they cannot alleviate the problems of others. Gifted children will often befriend a child whom others tease, perform little acts of kindness for a teacher or parent who seems unhappy, or weep at the cruel treatment of an animal. They will frequently ask questions and express concern about world problems—poverty, war, environmental issues. Sitting in an auditorium, I once chanced to overhear a conversation between two gifted children. It began with one of them describing a wilderness trip he took with his family, but quickly changed. It went like this: “I’m glad to see the land, because when I have kids, it will all be gone.” The other child said, “I know. No one bothers nature now, but when the animals and trees only live in a museum, then people will know. I’m glad I wasn’t born any later. I wouldn’t want to be a kid in a place where there are no real woods or wild animals.” This is not a conversation one usually hears in a school auditorium, and if I were a teacher, it would certainly rate as a sensibility suggesting giftedness.

Perhaps the most elusive sensibility to document is the intuitive one. It is a special sense, a finely tuned response to the child’s environment, an ability to “read” a person or situation beyond the merely outward appearance of things. Many gifted children possess intuition in abundance. It is what makes them aware of truths invisible to other people, sense the feelings of those who keep silent, able to feel their way to a completely new solution or idea and yet unable to explain how they did it. Intuitive responses often happen so quickly that children are unaware of them. They will say, “I don’t know how I know this, but I do. I just started trying certain things and somehow I figured out another way to do this.”

Teachers collect information on sensitivities like these through direct observations, checklists, and information from parents. Another aid to finding gifted young children in this way is the Fisher Comprehensive Assessment of Giftedness Scale: What to Look for When Identifying Gifted Students (Fisher, 1994). It ranks children’s sensibilities, their keen consciousness, enthusiasm, interest, in-depth focus, and serious concern. This essence of giftedness is compared with children’s classmates, not national norms. The Scale also assesses areas of precocious development, applied motivation and creative output, aesthetic

Joan Franklin Smutny
PARENT CHECKLIST

My child:
• Is very aware of physical surroundings.
• Has acute awareness of emotional surroundings.
• Reacts intensely to noise, light, taste, smells, or touch.
• Needs less sleep than other children of same age.
• Has long attention span for activities that interest her/him.
• Becomes so involved that he/she is not aware of anything else—"lost in own world."
• Has an excellent memory.
• Insists that people be "fair." Complains when things are "unfair."
• Is extremely curious—asks "Why?" "How?" "What if?"
• Asks questions about abstract ideas like love, feelings, relationships, or justice.
• Explains ideas in complex, unusual ways.
• Is very interested in cause-effect relationships.
• Reasons well. Thinks of creative ways to solve problems.
• Has a vivid imagination and an ability to improvise games or toys from commonplace materials.
• Is extremely creative—makes up elaborate stories and excuses; sees many possible answers/solutions; spends free time drawing, painting, writing, building, experimenting, or inventing.
• Has a spontaneous and whimsical sense of humor.
• Likes to play with words. Can absorb the speech patterns and vocabulary of different people and imitate them in stories, rhymes, or games.
• Is often singing, moving rhythmically, or using mime in self-expression.
• Is responsive to music and can improvise with tunes, rhythms, sounds.
• Is a leader in organizing games and resolving disputes.
• Moves around a lot. Is very active—sometimes seems hyperactive.
• Can concentrate on two or three activities at one time.
• Craves stimulation and activity. Is rarely content to sit idle.
• Is eager to try new things.

perceptions, and much more. This broad view deepens the scope for finding gifted children beyond test scores.

HOW TO DOCUMENT TALENT IN YOUNG CHILDREN
One of the clearest ways to document talent in young and especially minority and economically disadvantaged students is to collect a wide range of their work, as well as observations and anecdotes describing behavior from parents and community members. This information could take the form of an ongoing portfolio and record of achievement. The process of gathering evidence should reach beyond the confines of a classroom and integrate what the child is capable of at home and elsewhere. Portfolios provide authentic assessment, evidence which is valuable in determining instructional plans, especially for children in kindergarten to third grade.

Advantages of portfolio assessment are that it does the following:
• Validates your observations and hunches about a child;
• Enables you to speak more informatively with parents and support staff about your plans;
• Builds a concrete bridge between you and parents so you can both see what the other is talking about;
• Helps you evaluate the child’s progress;
• Guides you to a more child-centered response curriculum;
•Broadens your ideas and choices to offer your children;
• Justifies what to look for in identifying other students and becomes a teaching tool for you;
• Creates a source of pride and accomplishment for the child.

A portfolio is a strength model, not a deficit model. It is a collection of products and observations about children at home, school, and in their community. Because expressions of giftedness vary in children and cultures, you will be looking for evidence of talent in a variety of domains—creative, intellectual, kinetic, emotional, intuitive. You can use audio and video tapes, projects the children have worked on, or notes casually written in the spur of the moment as part of the portfolio.

(see SMUTNY, page 25)
Needs Assessment for GT Programs

Conducting a needs assessment can be a long and arduous task; therefore, many of us put it off or try to ignore the fact that it is a necessary part of establishing and maintaining educational programs. Why conduct a needs assessment? The answer to that is that we need to collect as much data as possible for decision-making related to establishing new programs, reviewing and evaluating existing programs, and for future needs.

Why are we making decisions and who are they going to benefit? Usually we are trying to determine what student groups we need to serve and how we are going to serve them appropriately. In gifted programs identification of gifted learners is intertwined with programming decisions. Determining who is “in” the program may be influenced by the program that is offered (Boyd, 1992; Davis & Rimm, 1989). On the other hand the program offered may depend on the needs of the identified gifted learners (Clark, 1988; Alexander & Muia, 1982). In either case data collection can be valuable in providing background information for both identification purposes and program decisions.

Some of the questions district gifted committees and administrators struggle with are: “After a definition of giftedness has been established, then what?” Do we identify the students and build a program around their specific needs? Or, do we decide on the type of programming our district can/wants to offer, then identify students whose needs match the program?” (Boyd, 1992, p.64). In order to answer these difficult questions, the local gifted advisory committee should organize and mobilize for a thorough collection of data commonly known as needs assessment. It will be the responsibility of this committee to analyze the data collected and to formulate the report. The GT advisory committee should be representative of all stakeholders, thereby providing individuals with expertise in the various areas for the data collection process.

Benefits of a Needs Assessment

A needs assessment helps the GT committee discover any possible mismatches in what is needed for gifted learners in the district and what realistically can be provided. It provides a clear picture of what can and cannot be developed.

Data Collection

Before engaging in data collection the gifted advisory committee should consult with the appropriate school administrators and keep them informed of plans and methods. The cooperation of everyone is needed to successfully complete the task. A major priority at the beginning of the endeavor should be determining the best way to communicate with those who have the information you need. Many problems and aggravations may be avoided by proper planning and effective communication before the initial data collection begins. (See Figure 1.) Remember you are collecting data at this point, not making judgments. As in brainstorming, get it all down, accept everything for input. Critical analysis comes after you have the facts in each area.

A needs assessment collects information in the following areas:

• General Student Body – examine the AEIS data report (TAAS Reports). This provides demographic information on gender, ethnicity, test scores, dropouts, at-risk students, current GT students, and it may even be able to provide population trend data.

• Current Gifted Population – get the specifics. What are the numbers for each category: gender, ethnicity, academic, at-risk within the GT population, LD within the GT population, and potential GT students? Were some students repeatedly nominated over the years, but for some reason not accepted for GT services? Why? Look at this list over time. Look for patterns that may indicate positive and negative information concerning the identification process used for each individual GT program in the district. Identify the instruments and methods that are used for GT identification in your district. Examine them for their usefulness and for any bias.

• School District Personnel – Who plays key roles in various aspects of identifying and providing services to gifted learners in your district? Identify them specifically, and make a list. Then look for their areas of expertise which can be utilized for the benefit of the GT learners. (See Figure 2.) Find out the attitudes of teaching personnel toward gifted education. Try to discover who is supportive and who is not supportive of the GT program.

• Campus/District Characteristics – the organizational structure. Use
Teacher and Staff Demographic Data

Name: ____________________________ Assignment: ____________________________
Campus: ____________ Assignment: ____________________________
Gender: M F Ethnicity: W H AA H A/PI NA Other
Degrees Earned: ____________________________ Date: ____________________________
CertificationAreas: ____________________________
Professional Development during past 2 years: ____________________________
Areas of special interest, knowledge, or hobbies: ____________________________
Are you interested in becoming a teacher of the gifted and talented? Yes No
Are you interested in teaching AP or Pre-AP classes? Yes No
I am not interested in teaching either of the above, however, I am interested in being involved as a resource person or a mentor.
Do you know of anyone that would be good at working with gifted and talented students? Yes No

Figure 2: Teacher Staff Survey (abbreviated version)

organizational charts. Is this truly how it works, or is it on paper only? What is the true structure? How are students and classes organized on each campus? There are many models available to GT programs. You will need to survey each campus about organization and scheduling for GT students. The campus administrators and GT teachers will be valuable resources.

• The Physical Settings in Which Individual GT Programs Operate - types of facilities, what is available, size, location, allotted time available for GT, condition of facilities, etc. Do these items match the program that will be housed? What are the limits associated with each campus setting? Site visits and discussions with local school administrators are required for this data collection. Ask about future plans related to buildings and facilities and their use.

• Economic Factors of the District and Local Community - budget, resources, and revenues. In this section your needs assessment must contain accurate information related to the current budget and future budgets predictions. Look at current costs and expenditures and at future projections. The economic health of the community and of the district will impact the GT budget. School board documents, central office budget officers, and campus administrators can help you collect the financial information relevant to the GT program.

• State and National GT Policies - Texas Education Agency's office of Gifted and Talented Education and the U.S. Department of Education can supply documentation on GT policies. Contact the Texas Education Agency for Texas Education Code 29.121-29.123 and 42.156 adopted in 1995 and the Texas Administrative Code, Subchapter A 89 1-98.5 adopted in May 1996 for specific statutes and policies. The Texas State Plan for the Education of Gifted/Talented Students (1996) is available. You may visit the TEA web site for Gifted and Talented Education information at http://www.tea.state.tx.us/gted. Many Texas school districts are undergoing District Effectiveness and Compliance (DEC) visits. This document is available at the TEA web site titled “District Effectiveness and Compliance Reference Guide for Gifted/Talented Education”. This seventeen page document provides insights into the DEC process and is very helpful in preparing for the DEC visit as it relates to GT programs.

• The Community - the greater environment in which the school operates. Collecting information related to the community that is served by the school can often provide support for school programs and can provide answers to problems that need solving. Look at the broad demographic data and trends of the community. Do they match the school population? What community support services are readily available for GT students in need? How can educators best interact with the business community for positive results for GT programs and GT learners? Your local Chamber of Commerce can supply some of this information. Your school may already have collaborative networks and contacts with various community groups and social service agencies. Ask administrators and resource personnel for assistance in collecting this information.

• GT Programs Options That Can be Realistically Sustained in the District. "... The greatest gains in teacher learning were in places where whole schools studied their student results and agreed on what they needed to learn collectively and to do differently to improve those results” (Renyi, 1998, p. 71).

As data from each area of the needs assessment process is collected, the GT committee should begin a critical analysis. This provides an awareness of what can realistically be sustained in your district in the area of gifted and talented education. An on-going review and update of the data will allow your program to flex with changes that occur and allows you to provide appropriate services needed by the gifted and talented students in your district.

SUMMARY
The difficult part is getting started and convincing others of the importance of the needs assessment. Once established the maintenance of the data should become a common habit in your district. The needs assessment provides the answers to the dilemmas of who to serve and how to serve them. "... The process of conducting a needs assessment generates a vast amount of information that allows gifted program planners to make appropriate decisions. ... The needs assessment is the logical place to begin formulating a program that assures efficient and effective use of the planners’ time and the gifted students’ time, as well” (Boyd, p. 66).

REFERENCES

(see LUCKSINGER, page 30)
Looking for Needles in a Haystack: Disadvantaged Gifted

Mary Caubel, Janet Whitley, and C. Renee Goodwin

Finding disadvantaged gifted kids is evidently difficult. Data shows that in Texas, and in the entire country, members of minority populations are underrepresented (Frasier, et al., 1995). The implication is that students who have limited proficiency in the English language, are economically disadvantaged, or represent certain minority groups, are not gifted. This is definitely problematic in view of the fact that giftedness is evident in every population group. Why is there no connection between what is stated and actuality? This discrepancy exists and must be addressed, particularly in Texas, where demographic changes are occurring rapidly. While swelling numbers of low socioeconomic and often disenfranchised students are stepping through the schoolroom doors needing all kinds of services, gifted education is rarely considered as a part of the solution. Addressing the issue of underrepresentation is important, and sweeping changes could be made using methods and strategies that are already available. Educational practices should be altered in order to improve options for disadvantaged students. Reversing the trend is imperative.

Frasier, Garcia, and Passow (1995) state that there are three major reasons for underrepresentation: test bias, selective referral, and reliance on deficit-based paradigms. It is easy to understand why test bias might cause a problem. The dominant group used in norming tests is white, middle-class, native English-speaking populations. Robert Sternberg (1985) states that conventional concepts of intelligence are incomplete and that, while ability testing and achievement testing are connected, they are disconnected from the outside world. What does this mean and why the concern? The system just described is set up to perpetuate itself. Traditionally, the view of school-related intelligence has been based solely on linguistic and logical-mathematical aptitude as measured by standard IQ tests. A high score is then “validated” because a high IQ student generally does well on standardized achievement tests; a cycle has been established. In reality, these types of tests only show the capacity for scoring well on other similar tests, rather than whether the test-takers will be successful in life. Success on these tests is what society has accepted as “intelligent,” ignoring that many high scorers, in fact, can not create or apply what they know to the real world. The norming of these tests, using white, middle-class, native English-speaking students, creates a system where students who do not fall into this category are set up to fail. This, in conjunction with the fact that the system focuses on a linguistic and logical-mathematical base, ignores students who might do well, if given the opportunity, in practical and creative intelligence areas delineated by Sternberg (1985) in his Successful Intelligence theory.

The emergence of selective referrals, the second type of underrepresentation identified, occurs when traditional tests are overvalued. Educators selectively refer only those students who score high on the selected tests. Referring by scores alone often leaves out the low SES or disadvantaged children of many minority groups. These students do not fit the system and many do not do well on standardized measures because these measures were not designed for them. If educators in the selection business would take Ruby Payne’s economic class inventories (1995), they would have an opportunity to understand how little they know outside their economic “caste” system. It is a real stretch for a middle class person or teacher to relate to life and issues outside their economic level. If the standardized tests had been normed on individuals from poverty with questions related to their lives, middle class students might not do as well. Standardized tests discriminate against students whose linguistic and perceptual orientation, cognitive styles, learning and response styles, economic status and cultural or social backgrounds differ from the dominant norm group (Frasier, 1995). Test bias and selective referrals have long been concerns, and in spite of efforts to eliminate both, they remain problems. These so called standardized tests in fact protect and buffer those in the selection business by making it easy to say, “they didn’t meet our criteria.”

Research indicates teachers and school professionals do not expect much from culturally and linguistically diverse students (Frasier, Garcia, Passow, 1995), thus leading to underrepresentation. These students are considered to be equally and negatively affected by their environments and language differences and are thus overlooked (Frasier, 1995). Payne (1995) describes several characteristics highlighting the fact that school professionals do not recognize the gifted behaviors exhibited in these students. Their use of the usual language register rather than the traditional language register used in the school setting along with the often evident lack of order and organization are two primary characteristics that mask gifted behaviors. In addition, some disadvantaged/poverty students may not think in terms of the future, thus typically relating only to things in the present. A tendency to be polarized in their thinking also makes it difficult to think abstractly. Another issue that might obscure seeing giftedness in disadvantaged students is the importance they may place on relationships over other aspects of living and working. This could manifest itself in classroom behaviors that focus not on completing assignments but on making connections with other students and people inside and outside the classroom. Having a sense of humor is often important to students of poverty. However, if that humor is displayed inappropriately, educators may not recognize it as a gift. Teachers who do not understand these issues related to poverty could conclude that disadvantaged students are not capable of giftedness, thus supporting current thinking — that if they don’t score well on tests, then they must be behind and can not
be expected to accomplish much. When this happens, underrepresented
groups are viewed as homogeneous, expectations are lowered, and they
are not considered for advanced level programming.

A third reason for underrepresentation is an over-reliance on the
medical model of serving students. The focus of this model is to iden-
tify deficits, highlighting the student’s weaknesses and beginning re-
mediation. Limited, if any, attention would be given to the student’s
strengths. With the above-mentioned characteristics Payne (1995) iden-
tifies in children of poverty, it is apparent that the student would not be
exhibiting the traditional characteristics of a gifted child; therefore,
chances are high that no potential would be recognized and no thought
gifted programming would be considered.

What conclusions could be drawn from these three major reasons
for underrepresentation? Clearly, a majority of professional educators
do not attempt to detect giftedness using a system other than the tra-
ditional means and methods. Efforts to look at multiple methods of
determining gifted potential that are fair to all students must be designed.
However, there are previously established methods and strategies that
individual classroom teachers and individual campuses can use to reach
out to disadvantaged students and help uncover their giftedness. The
central core of assumptions that educators have about disadvantaged
students and their gifted potential must be overcome. While educators
must analyze their beliefs and misconceptions about disadvantaged
children, about their ability to learn in school and eventually succeed
in society, it is paramount, due to the increasing number of disadvan-
taged children, for the problem to be addressed.

Texas A & M researchers (Murdock, et. al., 1997) indicate that the
percentage of family households in poverty will increase to 17.5 per-
cent by the year 2030, with the greatest increases affecting single-par-
ent families: 29.7 percent for families headed by males and 49.1 per-
cent for households headed by females. In addition, school enrollment
is expected to increase by 60.7 percent, with the number of Anglos
decreasing, while the sizes of other ethnic groups increase drastically.
Educators must change their thinking concerning economically, ethni-
cally, and culturally diverse students. But how can educators change
old belief systems and move to an era where strengths of disadvan-
taged students are nurtured and supported and giftedness recognized?

While we could wait for a coercive change process with a state
mandate demanding that each campus identify a proportional percent-
age of economically, ethnically and culturally challenged students for
gifted programs, a more proactive approach would be for each class,
campus, and district to begin a self analysis, asking why the class-
rooms for gifted students are not proportionally reflective of their stu-
dent body population. Immediate instructional practices should be put
in place to promote the emergence of the giftedness of students.

Two instructional practices that will benefit disadvantaged stu-
dents, as well as all students, to promote the emergence of their gifted-
ness are the use of learning styles (Dunn, Dunn, and Perrin, 1994) and
Howard Gardner’s Multiple Intelligences (Gardner, 1983). A founda-
tion for identifying strengths, they offer educators a variety of ways to
understand and teach individual students in the style in which they
learn best. How can teachers use these two concepts to examine and
modify what they do Instructionally to meet the unique needs of the
disadvantaged gifted student?

The framework of learning styles allows educators to identify
strengths of disadvantaged students leading to opportunities to develop
rich learning environments. Dunn and Dunn (1994, p. 2) define learn-
ing style as “the way each learner begins to concentrate on, process,
and retain new or difficult information.” They describe some basic
elements, which they believe form the basis for examining the learning
style preferences of students. Those elements, which describe many
gifted students, are that they are highly motivated and have strong pre-
ferences for kinesthetic and/or tactile perceptual strengths, although
they also tend to be high in auditory and visual perceptual abilities as
well. They prefer to learn alone rather than in groups, and they prefer
late morning and afternoon learning times. Another way to examine
learning preferences is through processing styles — is a student anal-
alytical or global in approaching learning tasks? Analytic learners pre-
fer to learn information sequentially and cumulatively. They want the
pieces to build into a “whole.” Globals, on the other hand, prefer to see
the big picture first, and then learn the details. Analytic learners tend
to be persistent and want to finish a task once they start on it, while
globals are less persistent — they like to work on several tasks simultane-
ously or take breaks while working. The Dans have found that most young
children are global and that some children become analytic when they
are adolescents and older.

Howard Gardner, in his 1983 book Frames of Mind, first described
multiple intelligences. He suggests that intelligence is characterized
by problem solving ability and that individuals learn in identifiably,
distinctive ways (Gardner, 1991). Gardner originally grouped capa-
bilities into seven categories of intelligences: linguistic, logical-math-
ematical, spatial, bodily-kinesthetic, musical, interpersonal, and
intrapersonal (Armstrong, 1994). An eighth intelligence, naturalistic,
was added by Gardner in 1995. Basic to understanding and working
with Gardner’s philosophy of intelligences is the belief that each per-
son possesses all eight intelligences and that each intelligence can be
developed to an adequate level of competency by most people. The
strength in Gardner’s model for working with disadvantaged children
is that it allows teachers to view students from multiple perspectives
and see all children as “smart” in their own way.

It is apparent that problems continue to exist in identifying and
working with disadvantaged gifted students. These students are often
not being identified because their giftedness is hidden by ineffective
identification methods. Underrepresentation is rampant. Administra-
tors and educators must be willing to make adjustments to allow the
emergence of talents of disadvantaged gifted students. Educators must
accept that these students do exist and find them using concepts such as
learning styles and multiple intelligences. The trend must be re-
versed and guided toward equal opportunities for all.

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(see CAUBLE, WHITLEY, & GOODWIN, page 25)
Bilingual and Monolingual Students Benefit from Unique Partnership at Magnet Schools

Marta Mountjoy, Diane Permenter, Luisa E. Arce Rogalla, Jan Roland, and Will Ramos

In the fall of 1987, three elementary magnet schools, called Academies for Excellence, were developed to provide appropriate instruction designed to meet the needs of three unique student groups: 1) one-third of the student body comprised of regular-education neighborhood children; 2) one-third identified as academically gifted; 3) one-third identified as artistically and/or musically talented students. Students are ability grouped for math and reading instruction and study in mixed ability groups for all other subjects, school-wide enrichment, and extended-day classes. The artistically and musically talented students participate in enriched art and music classes, in addition to academic and full-time art and music programs.

The baseline thinking skills curriculum for all students in grades kindergarten through grade five is the Talents Unlimited Model. Verbally and mathematically gifted students receive advanced instruction through differentiated curricula and technology integration. The Bilingual Gifted Program begins in grade two and continues through grade four. Students become more integrated at grade five, as they participate in a gifted ESL class. While these students are served with curriculum that parallels the monolingual gifted program, they have the added dimension of learning English as a second language. These students not only benefit from the magnet school format through homogenous and mainstream classes, but they offer their monolingual peers the gift of cultural diversity and the opportunity to learn Spanish, as well. With this philosophy in mind, the Bilingual Gifted Program has adopted as its theme, "It's a Gift to be Bilingual." All of these academy students enjoy many speakers, field trips, integrated units of study, and music performances, in addition to counseling and study skills opportunities.

HISTORICAL PERSPECTIVE AND INITIAL DEVELOPMENT OF BILINGUAL GIFTED PROGRAM

Nationwide statistics document that Limited English Proficient Hispanics are critically underrepresented in Gifted and Talented programs. With this information as a benchmark for program design, the Garland Independent School District, a suburb east of Dallas serving 47,693 students in kindergarten through 12th grade, has initiated a proactive innovative response to this underserved population group.

From its inception in 1981, various program formats provided limited services to academically gifted Hispanics students until the 1994-95 school year. At this time, Garland's Gifted and Talented Program identified intellectually, academically, artistically and musically talented students using typical assessment procedures and measures such as the Kaufman Brief Intelligence Test (K-BIT), The Iowa Tests of Basic Skills (ITBS) reading and math scores, the Visual-Motor Integration Test (VMl) and several informal talent assessments. Identified students in elementary, middle, and high school received instruction in magnet schools. Participants were placed in homogenous and heterogeneous classroom arrangements. Analysis of the ethnic configuration of these programs found the following representations: 2% Hispanic, 5% African American, 6% Asian, no Native American, and 87% "other." At that time the gifted program population did not reflect accurately the district's overall ethnicity, with marked underrepresentation of minority students.

Although the elementary Bilingual/ESL teachers had occasionally nominated potentially gifted Hispanic students, these students were seldom placed in the program. When these students were assessed using traditional achievement, ability and fine motor instruments, they seldom obtained scores as high as the identified gifted students. This pattern of referral and nonacceptance was frustrating to teachers, parents, and students. In search of an equitable solution to this problem, Garland educators turned to Edgewood ISD, a suburb of San Antonio, for ways to restructure their identification process and program model.

Currently these students represent the following ethnic populations in GISD: 24% Hispanic, 16% African American, 6% Asian, 7% Native American and 52% other. As a result of implementing a variety of new assessment procedures, Garland ISD now serves 9% of its Bilingual Hispanic student population in its Gifted Program, as compared to the 3% national average.

BILINGUAL GIFTED PROGRAM DESIGN

A UNIQUE PARTNERSHIP

During the 1993-94 planning stages of this new component, the following Bilingual Gifted Program goals were developed:

- Provide a quality accelerated and academic enriched program for economically and culturally diverse gifted Hispanic bilingual students.
- Increase family support for the gifted Hispanic bilingual student through parent participation in all areas.
- Implement on-going staff development in the areas of gifted and multicultural education and second language acquisition methodologies.
- Accelerate the development of the student's bilingualism to far surpass the challenge of high school Spanish courses and Advanced Placement Spanish college courses.
- Develop the competitive academic and language competencies needed for gifted Hispanic students to succeed in the mainstream Gifted and Talented Program, to qualify as National Metti Scholars, and ultimately to meet the challenges of a pluralistic society.

AUTHENTIC ASSESSMENTS = ACCURATE IDENTIFICATION

Convinced that identification procedures and program design needed to be modified, Garland educators agreed to 1) focus more of the assessment on potential, creativity, and problem solving; 2) administer all tests in Spanish; 3) provide identified bilingual gifted students with a bilingual class as an integral component of the magnet school program; and 4) provide an annual summer enrichment program.

In order to ensure an optimum learning environment for each student, a student profile is developed for each program candidate. This student profile is comprised of various formal as well as informal assessments, including the Screening Assessment for Gifted Elementary Students-Primary (SAGES-P), the Matrix Analogies Test-Short Form (MAT-S), the Spanish Assessment of Basic Education (SABE), which is the Spanish version of the ITBS, the Test of Divergent Thinking, and the Williams Scale by Dr. Frank E. Williams. The Bilingual/ESL
Coordinators give updated training to the Bilingual/ESL gifted teachers on how to properly administer the various tests prior to the designated assessment day. Following the official assessment day, teacher and parent nomination forms are added to the student profile, thus giving a comprehensive picture of the student’s overall performance.

**Collaborative Partnership Between Two Special Programs**

Since its inception in 1994, the Bilingual Gifted Program Model in grades two through five has been organized on the district level by the Bilingual and Gifted Program central office administrators. A district-level Bilingual Gifted Program Steering Committee meets on an ongoing basis to continually refine the program goals and objectives.

The Gifted Program Coordinator and the Bilingual/ESL Coordinator plan monthly to implement program activities. In addition, the Bilingual/ESL and Gifted departments designate required time and monies essential to all other aspects of the model such as:

- Assessment Procedures
- Parent and Community Involvement
- Program Evaluation
- Staff Development
- Summer Enrichment Program

**Bilingual Gifted Program Expansion Plans**

Based on annual parent evaluations, teacher requests, and the district’s emphasis on early intervention for all high achieving bilingual students, the Bilingual/ESL and Gifted Program Coordinators have proposed the following plans in for the 1999-2000 school year:

- Talent Development for all kindergarten and grade one Bilingual students
- Leadership Development for middle school ESL students
- Gifted and Talented staff development for all Bilingual and ESL teachers
- Mentorship model with Bilingual Gifted Program teachers for regular Bilingual Program classroom teachers
- Summer enrichment program for primary “Talent Pool” Bilingual and ESL students

**School District Support And Staff Development**

Not only does Garland ISD promote and support the Bilingual Gifted component of the Gifted and Talented Program financially, but it continues to seek to provide substantial student, parent, and teacher benefits as well. Bilingual/ESL students may use the complimentary bus transportation services for attending school, afternoon tutorials, and/or enrichment. PTA and informational meetings with parents always include child-care and refreshments. All magnet school teachers are provided (without cost) thirty hours of gifted education from the partnership between the Bilingual and Gifted Program departments. In addition, the Bilingual Gifted Program teachers attend local and state conferences for advanced staff development and serve as mentors to their grade level monolingual peers.

**Parent/Community Involvement**

Parents are invited to engage in extensive involvement in their children’s education. The state requires parental participation in decision making in relation to the educational plan of the Limited English Proficient student. Parents of Bilingual Gifted students are encouraged to participate at academy information meetings which are held regularly for the bilingual community. Topics include general and specific information about both the Bilingual and Bilingual Gifted programs. Hispanic parents may access the same service in order to eat lunch with their child at school, visit and volunteer in classrooms, or attend teacher/parent conferences.

Within each academy, volunteers help with these and other activities:

- Field trips
- Camp Grady Spruce
- Overnight field trips
- Clinic/Office
- Classrooms

As a result, the Hispanic parents feel welcome and integrated within the total school environment. As one parent reported, “This is the first time I have felt like a real person in a school.”

**Summer Enrichment**

All identified Bilingual Gifted students, as well as those who are newly nominated, are invited to attend Garland’s annual three-week Summer Enrichment Program. Parents are asked to pay a nominal Camp Gisd registration fee, which includes classroom materials, a t-shirt, and hat. The Bilingual program provides the facility, transportation, basic classroom supplies, and classroom assistants. The curriculum is designed by the selected Bilingual Gifted Program teachers with a focus on introducing creativity, critical thinking, and problem solving skills to newly identified Bilingual Gifted students. Additionally, Bilingual Gifted students who have been in the program may attend half-day advanced content classes during the same three weeks.

**Student Growth = Student Success**

The original class of twenty-three Bilingual Gifted students are currently sixth and seventh graders at Austin Academy of Excellence, Garland’s middle school magnet. Before these students began Austin Academy, they were exited from the district’s Bilingual/ESL program. As a result, they are presently participating in Enriched Honors (gifted classes), choir, band, art and after-school activities. As might be expected, these students encountered normal growing pains as they experienced the transition from elementary to middle school, but the positive results were worth the struggle. While all twenty-three students are not performing at the 90th percentile on all areas of the Iowa Test of Basic Skills, eleven of these students scored at or above grade level in Math and/or Reading. All twenty-three students mastered all objectives in English on the spring 1998 TAAS test. Austin Academy teachers closely monitor their classroom performance and provide academic mentors for peer support.

**Conclusions/Observations**

Based on the increased number of identified and served Bilingual/Gifted students, this district has made commendable progress. Still it is not content with status-quo. As active advocates for Bilingual/Gifted children, Garland educators are continuously looking for ways to grow and develop this program to its full potential. With regret they look to the past; with pride they look to the accomplishments of the present; and with renewed hope and energy they look to the promise of the future.

(see MOUNTJOY, page 25)
children with very good hearing, and he would be fairly doing his job.

**The Closed System of American Education**

I believe that schools in other parts of the world, including the U.S., echo the Jamaican situation, without being aware of it. In most schools, two kinds of abilities are at a premium: memory abilities (those abilities used to memorize, recall, and recognize information) and, to a lesser extent, abstract analytical abilities (those abilities used to analyze, judge, evaluate, compare, and contrast fairly abstract concepts). When we identify gifted children, we identify them as excellent primarily with respect to these abilities. The ability tests we use measure these skills, learning from instruction requires them, and then achievement tests assess the degree to which the abilities have been applied successfully. People who do well on the ability tests tend to do well in school, and vice versa, because both settings require similar abilities.

The problem is that these abilities are not necessarily the ones that matter most in the life activities for which school is supposed to prepare our children. How many times have you had to memorize a book or a lecture in your job as a school administrator or even as a teacher? Unless you teach math, how many times have you had to remember the theorems you learned in plane geometry? How many times have you seen the extremely obscure words that often occur on vocabulary tests? Probably almost never. You could be a gifted teacher but only a fair memorizer. But there are other things you have to do, to be gifted as a teacher or in almost any other demanding job.

Jobs require memory and abstract analytical skills in some degree, but they also require other and arguably more important skills as well. It is no surprise, therefore, that even supporters of current tests who are as traditional as Richard Herrnstein and Charles Murray in *The Bell Curve* admit that conventional tests of abilities and even of achievement predict only about 10 percent of the variation among people in real-world measures of success. In other words, these tests are only poor predictors. What happened to the other 90 percent? I address this problem in a book I have written.

**Successful Intelligence**

In my book, *Successful Intelligence* (Plume, 1997), I argue that intelligence in everyday life requires a broader range of abilities than is measured by conventional tests. The problem with these conventional tests is that they spotlight as gifted those children who have substantial doses of certain abilities (especially memory and abstract-analytical ones), but leave in the dark children with other kinds of abilities, such as creative and practical ones. Children with other kinds of abilities may be derided from the fast track early in life, with the result that they never get the opportunity to show what they really can do. Not only do we disenfranchise these children, but we provide almost limitless opportunities for those individuals who do not necessarily have the broader range of abilities they will need to take advantage of the opportunities they receive. The best performers on the job are not necessarily going to be those who got straight A's in their schooling. Such grades might not hurt. But the practical skills required to do a job well and to maintain a life outside the work place are probably going to be a lot more important than the memory and abstract analytical skills that led to A's in courses. Similarly, the creative skills required to respond to a rapidly changing environment are also ones not likely to have been rewarded in most classrooms.

The problem with our present curricula is that practically all responsible jobs require creative skills, but students are not adequately encouraged to develop these skills. Scientists may need abstract-thinking skills, but without the creative skills to generate new ideas and the practical skills to gain acceptance of their often unconventional ideas, they are lost. Artists need creative skills to do their work, and practical skills to get it displayed and accepted. Teachers need the creative skills to bring a fresh approach to their teaching, and the practical skills to make meaningful contact with students, parents, and administrators alike. Ironically, the skills we value most of all in the conventional school curriculum seem to be those that often matter least in life.

**Teaching and Assessing for Successful Intelligence**

In order to help remedy this situation, I have worked with colleagues at Yale to try to restructure the processes of ability testing, instruction, and assessment of achievement. In collaboration with Michel Ferr Ari, Pamela Clinkenbeard, and Elena Grigorenko, I started by developing a group-administered research version of what I refer to as the Sternberg Triarchic Abilities Test (STAT). There are two levels currently available at cost for research purposes—one for children at the high school level (roughly ages 15-18) and one for children at the intermediate, fourth-grade level (roughly ages 9-10). The test measures the conventional kinds of abilities, but other abilities as well.

One-third of the test measures the kinds of memory and analytical abilities evaluated by conventional tests of intelligence and scholastic abilities. Another third of the test measures abilities more germane to creative thinking and coping with novelty—the ability to think in novel ways. And the last third of the test measures practical abilities of the kinds needed to adapt to everyday life.

The three kinds of abilities—(1) memory-analytical, (2) creative, and (3) practical—are each measured in four different ways: via (1) verbal, (2) quantitative, and (3) figural multiple-choice items; and via (4) essays. The multiple-choice items are objectively scored, the essay items subjectively scored via trained raters (who are taught to focus on the abilities being measured and to ignore irrelevant attributes, such as spelling or punctuation). The goal is to obtain a more nearly complete picture of a child's abilities than would be possible from a conventional test.

The memory-analytical section looks pretty much like a conventional test, requiring students to figure out meanings of words in context (verbal), complete number series (quantitative), and complete figural matrices with a missing term (figural). The high-school level analytical essay requires students to analyze the advantages and disadvantages of armed security guards in schools. The creative section is less conventional, requiring students to solve verbal reasoning problems with counterfactual premises (e.g., what would the solution to this analogy be if money fell from trees?), solve quantitative problems with new mathematical operators (e.g., *fiex*: *A fiex B = A + B, if A is greater than B; and A - B, if A is less than or equal to B), and complete figural series with unusual mappings. The high-school creative essay asks the student the design of an ideal school. The practical section requires students to solve verbally presented everyday problems faced by typical high school (or elementary-school) students, solve practical quantitative problems involving recipes, train schedules, or purchase of athletic-event tickets, and plan routes using (figural) maps. The high-school practical essay requires students to describe a problem they have and three practical solutions to it.

**Teaching and Assessing for Successful Intelligence**

When we selected high school students for a summer program on the basis of this test, some interesting things happened. Students all around the country took the test. We selected five groups: analytically gifted, creatively gifted, practically gifted, gifted in all three abilities, and not gifted in any of the three abilities. Our first finding was unexpected.
The analytically gifted group looked pretty much like a standard gifted group: mostly white, middle-class, and attending strong schools. But the creatively and practically gifted groups were much more diverse in terms of ethnic, socioeconomic, and educational background. In other words, we found that we had selected more minority students not through any program of “affirmative action,” but through a program of recognizing and valuing abilities that schools typically neglect, both in their instruction and in their assessments.

We also found the test to be reliable and predictively valid. In a study of a summer program for the gifted held at Yale, we found that the analytical, creative, and practical sections all predicted achievement in a high-school psychology course. This course had been taught in different ways to value analytical, creative, or practical abilities. So, for example, an analytical task might involve analyzing the strengths and weaknesses of a scientific theory or experiment; a creative task might involve generating a new theory or experiment; and a practical task might involve applying a theory or experiment to one’s own life.

In our study, the best predictor was analytical abilities and the poorest, practical. In a replication performed by Deborah Coates at the City University of New York with poor, African-American children, the pattern of prediction was reversed, with practical thinking giving the best prediction and analytical thinking the poorest.

We also found that students who were placed in an instructional program that matched their pattern of abilities outperformed those who were mismatched. In other words, if students are taught in a way that at least partially values their strengths, they perform better than if they are taught in standard ways that always value the same abilities, namely, the memory and abstract-analytical ones.

Perhaps you are thinking that it is not feasible to match instruction to students’ patterns of abilities. We anticipated this objection. So together with Bruce Torff and Elena Grigorenko, I designed a study that taught either third-grade social studies or eighth-grade science in one of three ways: in the traditional way, with analytical (critical-thinking) emphasis, or with a three-prong emphasis on analytical, creative, and practical as well as on analytical abilities. As it happened, the third-graders were not preselected in any particular way, whereas the eighth-graders were selected as gifted by the SAT. The achievement of all students was assessed via analytical, creative, and practical performance assessments, but also via standard multiple-choice assessments that emphasized the kinds of memory-learning that are emphasized in most standardized achievement tests and statewide mastery tests. Regardless of whether students were previously identified as gifted or not, the three-prong instruction not only resulted in better performance on the performance assessments, but even.p on the multiple-choice memory-based assessments. In other words, by letting students learn the material in three different ways, and thereby make the most of their patterns of abilities, students learned better; even when achievement was measured in conventional ways.

To effect change in education, we need not only change the ability tests, but the instruction and the tests of achievement as well. When we emphasize all three kinds of abilities—analytical, creative, and practical—rather than just one, we will find that many of the students who now seem rather inert actually have abilities that, under traditional systems of testing and instruction, remain hidden and ultimately go to waste.

We can make the change with relatively little effort because teachers already know how to teach analytically, creatively, and practically. Often, they are afraid to do so lest their students not do well on mastery or other conventional tests. Our results show that the students will actually perform better on all tests when given a chance to learn in a way that best allows them to bring their strengths to bear on their classroom learning.

Robert J. Sternberg is IBM Professor of Psychology and Education at Yale University. He is a Fellow of the American Academy of Arts and Sciences and has served as President of the Division of General Psychology and Educational Psychology in the American Psychological Association. His recent books include Handbook of Creativity, Thinking Styles, and Intelligence, Heredity, and Environment (coedited with Elena Grigorenko).

(from RENZULLI, page 7)

The teacher/facilitator’s role is crucial in escalating the content level of a cluster. Although it is not necessary for the teacher/facilitator to be thoroughly familiar with the content area(s) beforehand, it is necessary

1. to have an interest in the topic and a “feel” for content escalation,
2. to know how to find the resources that will advance the level of study,
3. to organize cluster activities so that knowledge escalation is pursued as part and parcel of the hands-on activities, and
4. to document the extent and level of advanced content that was pursued in the cluster.

Left to their own devices, the students in the bird house cluster might have skipped the underlying research on ornithology and marketing in favor of the sawing, hammering, and painting that was involved in the cluster’s activities. If such were the case, the cluster experience would have prevented students from having opportunities for higher levels of learning. Indeed, it could have fallen prey to the “fun-and-games” criticism that a casual observer might have made.

In the guide that follows, we will offer suggestions for raising questions and obtaining resources that will assist teacher/facilitators in the process of content escalation. This process is obviously more demanding than merely guiding the hands-on aspects of a cluster, but it is also an opportunity for offering creative suggestions about the direction that the work of a cluster can take, and of guaranteeing that powerful learning is a hallmark of any cluster.

**GUIDELINES FOR DEVELOPING AN ENRICHMENT CLUSTER**

The following guidelines are designed to assist you in planning an au-
Enrichment Cluster Planning Guide

Joseph S. Renzulli

1. **Getting-Started-Ideas**

2. **General Area(s) of Knowledge**  
3. **Specific Area(s) of Knowledge**

4. **The Key Questions**

5. **Resources**

6. **Title and Description**

### 1. Getting Started

Think about some of the things in which you have had a personal interest. Use these thoughts to write down a few words about an enrichment cluster you might like to do. We will call these early thoughts your "getting-started-ideas." Here are a few topics that others have written down as getting-started-ideas: Poetry, Environmental Studies, Horses, Rock Wall Building, Landscaping, Science Fiction, Cartooning, Medieval Castles, Math Puzzles, Inventions, Film Making, Conservation, Model Airplane Design, World War II, Photography, Sports, Cooking, Architecture, City Planning, Bird Watching, History of Old Movies, Pottery, Ancient Rome. Don't worry if you are not certain about a topic at this early stage of the process. Write down several possibilities just to get the ball rolling.

### 2. General Area(s) of Knowledge

Use the following list to indicate the general area or areas of knowledge into which your getting-started-idea falls:

- Language Arts, Literature, and the Humanities
- The Arts
- Physical and Life Sciences
- Social Sciences
- Mathematics
- Computers
- Home Economics/Industrial Technology
- Physical Education
- Interdisciplinary Studies
- Other (Specify)

### 3. Specific Area(s) of Knowledge

Indicate the specific areas(s) within the general area(s) upon which your cluster will focus. For example, if the general area is the arts, specific areas might be puppetry, fashion design, musical composition, modern dance, ceramics, or water colors. In the general area of the social sciences, specific areas might be public opinion polling, geography, local history, genealogy, demography, or animal behavior. In the general area of language arts, literature, and the humanities, specific areas might be short stories, poetry, journalism, play writing, biography, literary criticism, and essays on contemporary topics. An all-purpose cluster in any one of these general areas could include opportunities for different students or small groups to work on several specific areas.

### 4. The Key Questions

The *sine qua non* (indispensable feature) of an enrichment cluster is that students act as practicing professionals in the development of a product or service. We can achieve this critical requirement by considering our getting-started-idea and the specific area(s) of knowledge from Numbers 1 and 2 above, and then answering the following five questions:

1. What do people with an interest in this area do?
2. What products do they create and/or what services do they provide?
3. What methods do they use to carry out their work?
4. What resources and materials are needed to produce high quality products and services?
5. How, and with whom, do they communicate the results of their work?
6. What steps need to be taken to have an impact on intended audiences?

*Note: These questions should also be used with students at the start of a cluster. In other words, students should have the opportunity to "discover" what you have found, and perhaps, to find some things that go beyond your own search.*

The answers to some of the above questions are obvious. Playwrights write plays and film-makers make films! The actual subjects of students' plays and films should be decided on by the students themselves after the cluster has gotten under way. We will discuss the process for exploring these kinds of decisions in a later section of this guide. But some areas are not so obvious. There are, for example, many different kinds of photographers (portrait, landscape, fashion, news, to mention a few); and there are dozens of aspects about World War II that might be topics for individual or small group research. We purposely want to leave the range of options for products and services open so that even within a pre-selected topic area, students will still have the opportunity to make decisions about what they will produce.

Unless you are already an expert in the specific area of knowledge upon which your cluster will focus, answers to the above questions will require some digging on your part. This digging is important.
because it will guide you in professionalizing the cluster, and it will provide you with background information to help escalate the content level and the level of inquiry of your cluster. Equally important is the personal growth that we, as adults, always experience when we learn something new, and the enthusiasm for a topic that almost always results from new learning. In other words, the affective value of learning and authentically applying new information on the parts of adults will unquestionably result in more informative teaching and in more enthusiasm for the work you do in the cluster. Some writers have said that this kind of growth-through-personal-involvement in new learning is a better kind of staff development than sitting through yet another workshop by yet another visiting expert!

5. Identifying Resources

There are only two ways to answer the questions listed above. The first is to find a practicing professional from the specific area of knowledge, and discuss the questions with him or her. The second is to find one or two books that describe the purpose and methodology of a particular field. Every field of knowledge has general (introductory) textbooks and "how-to" books that describe the actual work done in particular fields. Just examining the titles of the following books will give you an idea about the type of book for which you should be looking:

- How To Trace Your Family Tree
- The Restoration Manual
- Usborne Introduction to Chemistry
- The Amateur Meteorologist
- Writing Family Histories and Memoirs
- The Book of Where and How to Be Naturally Geographic
- My Backyard History Book
- The Amateur Naturalist: Explorations and Investigations
- Understanding History: A Primer of Historical Method
- Ecology: A Practical Introduction With Projects and Activities
- Usborne Guide to Fashion Design
- Experimenting With Inventions
- Understanding and Collecting Rocks and Fossils
- A Student's Guide to Volunteering
- How To Write and Give A Speech
- The Craft of Interviewing
- Oral History: A Guide for Teachers
- Getting Published
- Kid Vid: Fundamentals of Video Production
- A Students Guide To Conducting Social Science Research

These titles are just a few of the hundreds of books that focus on the how-to or investigative methodology of various subject matter areas. Most of them were written for young audiences or introductory investigators, and in most cases, they can be used as resource guides for students as well as adults who are facilitating a cluster. The level of a cluster can also be escalated by obtaining introductory college level textbooks in disciplines such as psychology, sociology, biology and the other fields of study typically included in college curricula. These books are especially valuable for identifying basic principles, major concepts, and the types of topics that are typically studied in a particular discipline. Some of these books include laboratory manuals that guide students through actual research activities in particular fields of study.

Three Clicks On the Web.

A marvelous resource for all types of advanced level resources is the Internet and the World Wide Web. I picked a topic in which I have an interest but limited background, and conducted a search. I started by going to the search engine Yahoo, and clicked on social science. In addition to listing numerous topics related to this general field, a dialogue box allowed me to type in and search for the topic, "oral history." This second click yielded 52 site matches for oral history. I then clicked on one of these matches entitled "Oral History Questions." To my wonder and amazement, I was presented with with and was able to print out four pages of questions that could be used in an oral history interview. Among the other 50 sites are descriptions of oral history projects, oral history associations and university centers that provide resources to interested persons, and subtopics such as Vietnam Veterans and the Oral History of Jazz. Wow! What a resource. The world of advanced level information is literally at our fingertips, and we need to use it so we can escalate the level of content and investigative methodology in our enrichment clusters and in all of our teaching activities.

6. Title and Description

Now that you have had the opportunity to explore the key questions and examine resources related to your specific area of knowledge, it is time to think of a creative title for your cluster and to write a cluster description. The title should be both snappy, and at the same time, give some indication that the cluster will deal with serious subject matter subject. Sometimes this twofold purpose can be accomplished by using a colon in the title. Thus, for example, a title such as Dig That Dance: A Choreographic Workshop attracts attention and points out a recognized area of the arts. Other titles that accomplish this purpose are: Lights, Camera Action: Techniques of Video Production; Dear Mr. Shakespeare: Play Writing for Young Authors; and The Mighty Duck Savers: Preserving the Ecology of Local Wetlands. Titles can also define the type of work that might be done in a cluster. Examples are: The Desktop Publishing Company; The Local History Research Team; The Female Mathematics Support Group; and The Creative Furniture Design Guild.

The cluster description should also convey two messages. First, the description should point out the kinds of questions that might be raised and/or the type of information that will be studied. Second, and perhaps most important so far as focus is concerned, are the types of products that will be produced in the cluster. Remember, the sine qua non of a cluster is that students will produce a product or prepare some kind of service. It is essential that this feature be mentioned in your cluster description. Here are a few examples:

- Flight School: Designing and Building Your Own Aircraft
  Basic principles of aerodynamics will be studied to learn what keeps airplanes in the air. You will design, build, and test fly your own model plane. We will have a contest to see whose plane flies the highest, farthest, and longest.

- Gamers Institute
  Explore the world of math games and puzzles. Investigate visual games and optical illusions, dice games and probability, origami, games of logic, problem solving brain teasers, and more. Learn how a games company develops their popular games. Create your own board game or puzzle, and share with the group in a "Game Meet".

CONCLUSION: THE IMPORTANCE OF AUTHENTIC LEARNING

Authentic learning is important for several reasons. First, schools should be enjoyable places that students want to attend rather than places they
endure as part of their journey toward assimilation into the job market and the adult world. Second, schools should be places where students participate in and prepare for intelligent, creative, and effective living. This type of living includes learning how to analyze, criticize, and select from among alternative sources of information and courses of action; how to think effectively about unpredictable personal and interpersonal problems; how to live harmoniously with one another while remaining true to one's own emerging system of attitudes, beliefs, and values; and how to confront, clarify, and act upon problems and situations in constructive and creative ways. Finally, authentic learning is important because our society and democratic way of life are dependent upon an unlimited reservoir of creative and effective people who know how to put knowledge to work in real-world situations.

**REFERENCES**


The Enrichment Cluster Planning Guide may be obtained by writing to Dr. Renzulli by writing him at:

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Joseph Renzulli is the Neag Professor of Gifted Education and Talent Development at the University of Connecticut where he also serves as the Director of The National Research Center on the Gifted and Talented. The author of numerous books and articles, his three most recent books are *Schools for Talent Development: A Practical Plan for Total School Improvement* (Renzulli, 1994), *The Schoolwide Enrichment Model: A How-To Guide for Educational Excellence* (Renzulli & Reis, 1997), and *The Total Talent Portfolio: A Systematic Plan to Identify and Nurture Gifts and Talents* (Purcell & Renzulli, 1998). Renzulli also developed the Annual Summer Confratute Program at the University of Connecticut.

18. Placing our concern for appropriate and challenging programming in the forefront of our work (e.g., Treffinger, 1998) leads us to move away from the traditional questions associated with "identification" (is the gifted or not? What criteria qualify the student for designation or selection?), and opens the door for a more powerful and dynamic process of identifying ways to respond to students' strengths, talents, and interests more effectively.

19. Talent spotting emphasizes searching for and documenting students' unique characteristics and their related instructional needs, enabling us to focus on bringing out the best in all students.

20. Profiling is a useful process for clarifying and describing all students' strengths and talents in relation to action planning for talent development. It uses formal and informal sources (e.g., test data, rating scales, observations and performance tasks, portfolios, and self-report data) to guide planning for talent development.

21. Helping students to recognize and understand their own emerging talents and then to use their self-knowledge in personal goal setting and career planning are also important outcomes of profiling and action planning.

22. Commitments to continuous improvement and innovation require on-going professional development for all staff members, consistent with principles of adult learning and effective leadership.

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Grover Young and Carole Nassab are Program Associates at the Center for Creative Learning and independent consultants. Grover has served in a variety of educational leadership and administrative positions in schools in Michigan. Carole has worked in the classroom, in special education, and in administration and staff development.

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CREATIVE PROCESSING STYLES FOR THE CLASSROOM

—Using Wide Categories
Students may find ample opportunities for creative thinking and problem-solving when reading about conflicts in the newspaper. For example, students reading a series of articles about a dispute between county officials, the company hired to build a new road, and citizens who traverse the road might use creative thinking to arrive at a workable solution acceptable to all parties. Students would have the opportunity to use wide categories, seeing the "forest" instead of the "trees," and look at broad possibilities rather than focusing on the problems of a single group of players in this conflict.

—Questioning Norms and Assumptions in Their Domain
Creative thinkers may emerge when science teachers ask students to analyze a scientific explanation and discuss its strengths and weaknesses. Teachers may ask students to discuss the strengths and weaknesses of the theory of gravity as it applies to a feather and a solid ball dropped from the same height at the same time. Even though students will consider the normal explanation, or entrenched way of thinking, that gravity would cause both objects to hit the ground at the same time, they must also think creatively, explore the plausible synthesis of other theories and the theory of gravity, and present their analysis.

—Being Alert to Novelty and Gaps in Knowledge
Problem-solving is a major component in mathematics education, and it provides students with opportunities to use several components of creative thinking. For example, students utilize divergent thinking as they consider possible strategy options for seeking a solution and use convergent thinking when they make decisions during the problem-solving process. Students think creatively as they recognize gaps in knowledge about the problem and plan means for retrieving needed information.

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Dr. Karen Meador is an independent consultant who lives in San Marcos, Texas. A frequent presenter at TAGT conventions, she is the author of numerous articles, book chapters, and books including Creative Thinking and Problem Solving for Young Learners, and It's in the Bag: Take-Home Activities to Promote Divergent Thinking (in press).
A Final Note

The gifted population in kindergarten through third grade do not always stand out. In many students, their youth makes talent appear elusive and inconsistent. Teachers are baffled that a young child who reads advanced texts can hardly spell, or that a child with an exceptional gift in music cannot read notes on a page. Other young talented students may be learning English or feel out of place because of culture or be behind the rest of the class because of poverty or some other disadvantage. Covering a wider ground of talent than formalized testing will help you to gain a truer picture of the children in your classroom and enable you to respond more effectively to their educational needs.

Resources

Fisher, M. (1994). What to Look for When Identifying Gifted Students. Available at: Gifted Education Press, 1-201 Yuma Court, PO Box 1586, Manassas, VA.


Joan Franklin Smutny is Director of the Center for Gifted at National Louis University in Evanston, Illinois. She has edited and co-authored six books on gifted education and was the 1996 recipient of NAGC's Distinguished Service Award.

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Diane A. Permenter (M. Ed in Bilingual Education and M.Ed in Administration), Bilingual/ESL Coordinator for Garland ISD, has collaborated with the Gifted and Talented Program in coordinating staff development and curriculum writing teams.

Luise Arce Rogalla, teacher at Kimberlin Academy magnet school for gifted and talented students, has made numerous presentations to parents, community members, and teachers.

Jan Roland, teacher at Hillside Academy magnet school for gifted and talented students, has presented information to Hispanic community organizations and conferences.

Will Ramos, teacher at Walnut Glen Academy magnet school for gifted and talented students, has presented at the National Association of Bilingual Educators.

Visit the TAGT web site at: http://www-tenet.cc.utexas.edu/tagt/
Researchers’ Reflections on the Field of Gifted Education: Issues for the New Millennium

Susan K. Johnsen

"The more things change, the more they remain the same." —Unknown change agent

During the past century, professionals have written about the issues that face the field of gifted education from identification to curriculum differentiation. These pioneers often challenged societal myths and persevered when funding was virtually nonexistent. As we approach the end of this millennium, these past events may provide insight in identifying the important issues for the next millennium. For this review, articles published in Gifted Child Quarterly, Journal for the Education of the Gifted, and Roeper Review during the past thirteen years were examined. To be included, the article had to focus on an historical examination of issues and events that influenced gifted education during the past century. I excluded articles that provided a historical overview of a single program, programs outside of the United States, and longitudinal studies of gifted individuals. I did include articles about pioneers and scholars who made significant contributions to the field of gifted education. As Borland (1990) mentioned, I did not find a comprehensive history of the gifted child movement. I did find summaries of historical events, legislation and litigation, and curriculum.

Authors tended to disagree on the originator of gifted education. Goldberg (1986) cited Thomas Jefferson’s proposal for free public schools for “able boys.” Silverman (1989) cited Sir Francis Galton’s Hereditary Genius (1869), and Borland (1990) identified Yoder’s (1894) pioneering study, “The Story of the Boyhood of a Great Man,” as the seminal work. While these differences were present, those who examined the history of gifted education frequently mentioned these pioneers—Galton, Goddard, Terman, and Hollingworth. Galton, Goddard and Terman developed instruments for measuring intelligence. At Stanford Terman modified the Binet-Simon tests for use in the United States and initiated a longitudinal study of 1528 gifted children that was published in the Genetic Studies of Genius series beginning in 1925. While Galton, Goddard and Terman assumed a strong hereditary view of giftedness, Hollingworth challenged their assumptions about individual differences and the inferiority of women through her observational studies. She concluded that “eminence and superior mental ability are not identical” since “sociological factors might limit achievement” (cited in Silverman, 1989, p. 92). She focused her research on gifted children’s education, particularly those with intelligence quotients greater than 180, their vulnerabilities, and their need for nurturance. While cited by only one article, studies were also conducted with African-American children during the 20s and 30s (Kearney & LeBlanc, 1993). Excluded from the early literature, these researchers similar to Hollingworth also concluded that “where sufficient provision is made for optimum development of Negro children, the gifted Negro child will emerge” (p. 133).

It was not until the 50s, however, that more widespread research was published on gifted and talented education (Abraham, 1986). At Columbia, Passow initiated the Talented Youth Project in 1954 (Kirschenbaum, 1998; Passow, 1986). Guilford, using the relatively new statistical procedure of factor analysis, identified divergent production and concluded that intelligence is a separate factor not measured by intelligence tests. At the national level, Rickover recommended a separate educational system for the gifted, but interest waned until the late 1950s with the advent of Sputnik (Abraham, 1986). Following Sputnik, more reports about the quality of American education were issued; the NEA initiated a talented youth project and Governor’s Schools were created. Acceleration and ability grouping became an administrative arrangement in many public schools. However, within five years funding was redirected. Legislation and litigation during the 60s and 70s tended to focus on equity issues—Head Start, Education for All Handicapped Children Act, Section 504, and PARC vs. Pennsylvania (Gallagher, 1986; Ford, Russo & Harris, 1995). While interest in the general field of gifted education declined, conferences and publications on gifted handicapped increased (Johnsen & Corn, 1989). Interest was not renewed until federal legislation in 1969, the Gifted and Talented Children’s Education Assistance Act, the 1972 Marland report, and the initiation of the Leadership Training Institute. While the Office of Gifted and Talented was opened in 1978, Reagan dismantled it with a consolidated categorical funding program. It was not until the Javits Act (1988) that federal money was specifically allocated to gifted and talented children. Under this legislation, the National Research Center for Gifted and Talented was established during the 1990s.

Goldberg (1986) explained these frustrating cycles of interest in gifted education in her article. Citing Tannebaum, she noted that when the nation feels vulnerable from external forces, then gifted education flourishes; when the nation is concerned with social inequalities, then money is diverted away from gifted education.

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Goldberg (1986) explained these frustrating cycles of interest in gifted education in her article. Citing Tannebaum, she noted that when the nation feels vulnerable from external forces, then gifted education flourishes; when the nation is concerned with social inequalities, then money is diverted away from gifted education. Gallagher (1986) also reflected that the government tends to respond to crises rather than to the development of long-term goals. Other researchers concluded that until gifted education has a federal mandate, its support will fluctuate and the educational entitlement of gifted students will not advance (Ford, Russo, & Harris, 1995; Zirkel & Steven, 1987).

The concept of differentiated curriculum has been elaborated by researchers and challenged by others during this past century. Using the early work of Hollingworth and Goddard, curriculum adaptations during the 60s were divided primarily between the administrative arrangements of acceleration and enrichment. Only Ward (1961) related curricular adaptations to gifted student characteristics. This focus on individual differences was supported by the research about expert vs. novice performance that was also begun during the 1960s (Hong, 1999). The Marland Report (1972) identified characteristics for a differen-
special grouping and the focus on the development of higher cognitive processes. Most curriculum models that were popular in the 60s and 70s were mainly process-oriented (Passow, 1986). The only two content-specific models were Johns Hopkins SMYP and MEGRSS math-ematics program. In 1981, the First National Curriculum Conference identified seven principles that addressed both content and process that are still referenced today. During the 90s, process-oriented models have been challenged because of limited research support. With national standards and achievement-oriented assessments, the differentiated curriculum pendulum is swinging away from the earlier enrichment models toward more rigorous content models. This change is supported by some (Margolin, 1996) and decreed by others (Grant & Piechowski, 1999). Some fear that a common, rigorous curriculum for all might not result in an appropriate education for gifted and talented that would elicit a learner response "commensurate with gifts or talents" (Passow et al., 1988, Herzog, 1998, p. 214).

In summarizing the current status of the field of gifted education, these researchers mention many of the same issues that are current today: grouping, gender differences, technology, early identification, standards for identification, fields of talent, parent education, preparation of regular classroom teachers, and funding (Abraham, 1986; Goldberg, 1986; Passow, 1986). This repetition led Passow to conclude that issues appear to be perennial—what was said in the past is still relevant today (Kirschenbaum, 1998; Passow, 1986).

Abraham, W. (1986). From Goddard to Gallagher—and beyond. Roeppe Review, 8, 218-222. Abraham reviewed the early history of gifted education in this article, outlining leaders, trends, issues, and its future. The author reported that before the 1950s, little research was published on gifted and talented education. References related only to Terman’s Genetic Studies of Genius, Leta Hollingworth, and Goddard’s Major Work Classes in Cleveland. During the 1950s, Rickover recommended a separate educational system for the gifted and interest escalated after Sputnik. The author identified issues that he believed should have been resolved earlier: flexible school entry, grouping, gender differences, technology, educational neglect, early identification, and funding. In the remaining part of the article, Abraham described seven essential components to the future of gifted education that included minority and handicapped children, parent education and involvement, child selection, community awareness, preparation of regular classroom teachers, and a National “Think Tank” of Concerned Persons.

Borland, J. H. (1990). Leta Hollingworth’s contributions to the psychology and education of the gifted. Roeppe Review, 12, 162-166. Borland reviewed Hollingworth’s contributions to the field of gifted that included the first college course on the gifted (1918), the first comprehensive text (1926), the direct observation of gifted persons, the development of the Speyer School at Columbia (1922), the design of enrichment units, and her challenge to Terman’s stereotypes of gifted children as “happy, healthy, popular, and destined for greatness” without appropriate nurturance. Borland concluded that the field of gifted education has been in place since Yoder’s (1894) pioneering study, "The Story of the Boyhood of Great Men," but that a comprehensive history of the gifted child movement has not been conducted.

Ford, D. Y., Rosso, C. J., & Harris III, J. J. (1995). Meeting the educational needs of the gifted: A legal imperative. Roeppe Review, 17, 224-228. This article provided a summary of the law for exceptional students and offered recommendations to ensure appropriate services for gifted students. Beginning with PARC (1971, 1972) and the Mills case in the District of Columbia (1972), the authors identified two major principles: children with disabilities have the right to receive a free and appropriate education based on their individualized needs and are entitled to procedural safeguards. Section 504 (1973) then protected all individuals with disabilities. P.L. 94-142 and later IDEA provided comprehensive rights for students with disabilities. Unfortunately in the Rowley case (1982), the Supreme Court established a floor of education that had the effect of “relegating the educational rights of gifted children to a low priority” (p. 226). In 1969, model programs for gifted and talented were funded under Titles III and IV of ESEA. After the Marland Report (1972), the first Office of Gifted and Talented was established and Title IV monies were made available for gifted education. While the Gifted and Talented Children Act of 1978 extended funding, all federal sources of funds for gifted education were placed in block funds under the Omnibus Budget Reconciliation Act of 1981. The Office of Gifted and Talented was closed as well. It was not until the Javits Act of 1988 that gifted education was again funded. The authors concluded that until gifted education has a federal mandate, its support will fluctuate.

Gallagher, J. J. (1986). Equity vs. excellence: An educational drama. Roeppe Review, 8, 233-234. Gallagher described the conflict in education over equity vs. excellence. The emphasis on equity during the 1960s and 1970s were reflected in Head Start and P.L. 94-142, the Education for All Handicapped Children Act. While money at the U. S. Office of Education provided over a billion dollars for handicapped children, no money was allocated for gifted children during the 1970s and early 1980s. Gallagher reflected that the government tends to respond to crises rather than to the development of long-term goals. He concluded with strategies for policy support.

Goldberg, M. L. (1986). Issues in the education of gifted and talented children: Part I. Roeppe Review, 8, 226-233. Goldberg examined historical and current issues in the field of gifted education. She traced the initiation of gifted education to Thomas Jefferson who proposed that free public schools be initiated for able boys who were too poor to pay for education. Goldberg believes that gifted education tends to be influenced by social and political forces. Citing Tannenbaum, she noted that when the nation feels vulnerable from external forces, then gifted education flourishes; when the nation is concerned with social inequities, then money is diverted away from gifted education. She reviewed three issues that relate to the determination of giftedness and talent: the identification of fields of talent; the standards for identification; and the criteria for the selection of assessment procedures. Historically, fields of talent are identified by national needs such as Sputnik. Standards are variable. For example, Conant proposed the top 5% identified as gifted and the top 20% as academically talented. While others define creatively gifted as those in the top 20% or the “number who can be accommodated by a particular school, class or program” (p. 229). Since performance varies for disadvantaged children, Goldberg suggested different criteria, situations, and/or areas of giftedness. The author also suggested different types of measures to assess aptitude in various fields. The author concluded by posing questions for research in the three issue areas.
in understanding gifted children. They included philosophers and educators in their list of people who described the purpose of education and the role of the teacher.

Hertzog, N. B. (1998). Open-ended activities: Differentiation through learner responses. *Gifted Child Quarterly, 42*, 212-227. This article reviewed the meaning of differentiation over the past two decades. In 1961, Virgil Ward provided a theoretical framework that related curriculum propositions to the characteristics of gifted children. These included the emphasis on “enduring methods and sources of learning” and “continuous, ongoing acquisition of data pertinent to problem situations” (p. 214). The Marland Report (1972) identified three characteristics for a differentiated curriculum—higher cognitive processes, instructional strategies that accommodate content and learning styles, and special grouping arrangements. In 1976, the Office of Gifted Education defined differentiated education as a process of instruction that is “integrated into the school program and is adaptable to varying levels of individual learning response” (p. 214). Reznick (1977) emphasized modifications that are beyond the regular curriculum, that address student interests and styles, and that allow students to pursue topics. In 1981, the First National Curriculum Conference identified seven principles that focused on curriculum for gifted/talented that are still frequently cited today. Maker (1982) suggested that the curriculum be accelerated, complex beyond the regular curriculum, match student interests, and address abstract concepts. Little research, however, has been conducted that addresses the principles of curriculum differentiation. Therefore the remainder of the article reported a study regarding the nature of open-ended activities that is related to Passow’s definition of differentiated curriculum—the curriculum should elicit a learner response that is “commensurate with gifts or talents.”

Hong, E. (1999). Studying the mind of the gifted. *Roeper Review, 21*, 244-252. Research regarding expert performance began during the 1960s. Differences between experts and novices noted in research are “amount, accessibility, and organization of knowledge, mental representations, accuracy and speed of information processing, and efficiency of cognitive strategies and metacognitive skills” (p. 245). The article then summarized approaches to studying the mind and encouraged more research in the area.

Johnsen, S. K., & Corn, A. L. (1989). The past, present, and future of education for gifted children with sensory and/or physical disabilities. *Roeper Review, 12*, 13-23. This article described the history of the gifted handicapped field. While Leta Hollingworth described disabled individuals in her book *Special Talents and Defects*, it was not until the 1970s that this population began to be recognized. In 1976 the first National Topical Conference on Handicapped Gifted and Talented Students was held. By 1977, the CEC distributed a Fact Sheet on Gifted Handicapped and TAG established a special committee on the Gifted Handicapped. Maker (1977) wrote the first book, *Providing Programs for the Gifted Handicapped*. With IEP’s and Public Law 94-142, more attention was paid to disabled students with strengths or gifts. During the 1970s, more research was conducted with special populations but interest waned during the 1980s as funding dissipated. The remainder of the article discussed characteristics of programs for the gifted disabled.

Kearney, K., & LeBlanc, J. (1993). Forgotten pioneers in the study of gifted African-Americans. *Roeper Review, 15*, 192-199. These authors reviewed the work of five scholars who studied gifted African-American children. At the University of Chicago, Bond (1927) found evidence to suggest that exceptional black children, those scoring 130 IQ on the Binet-Simon Scales, had been encouraged by their parents to read. He believed that early enrichment might compensate for poor schooling. Proctor (1929), a social worker, identified 30 exceptional children in the Washington D.C. schools and described the poor quality of their education and limited access to enrichment. Terwilliger (1934), one of Hollingworth’s students, studied 10 gifted children from Harlem and concluded that 90% of the group selected professional occupations. Jenkins (1935), a student of Paul Witty, studied seven racially segregated elementary schools on the south side of Chicago. Through a multi-level screening process 103 gifted children were located. He concluded that “where sufficient provision is made for optimum development of Negro children, the gifted Negro child will emerge” (p. 1993). Finally, Theman (1942), another student of Paul Witty, conducted a follow-up study of Jenkins’ children. She found that the students were highly interested in school but had a much lower achievement test rating than the gifted white boys and girls in Terman’s study. The authors concluded these studies were not integrated into the field because of the established social, political, and academic paradigms of the 1930s.

Kirschenbaum, R. J. (1998). Interview with Dr. A. Harry Passow. *Gifted Child Quarterly, 42*, 194-199. Through his involvement in the field of gifted education since the 1950s, Dr. Passow provided a valuable perspective of the field of gifted education. Passow discussed his research at Talented Youth Project began at Teachers College in the 50s, Columbia University; the National Educational Association’s Conference on the academically talented following the launch of Spuntik; the National Defense Education Act of 1958 that stimulated curriculum reform; the UNESCO Institute that focused on measuring international levels of achievement; and national reports such as *A Nation at Risk*. In his discussion, he addressed such issues as equity vs. excellence; teacher training; various conceptions of giftedness; administrative arrangements vs. curriculum differentiation; assessment; national curriculums; and his definition for a gifted person: “an individual with potential for outstanding achievement in a socially valuable area” (p. 198). He concluded the interview by stating that what was said in the past is still relevant today.

Margolin, L. (1996). A pedagogy of privilege. *Journal for the Education of the Gifted, 19*, 164-180. Margolin reviewed the early gifted-child curriculum in this article. This curriculum primarily focused on promoting students ahead of their peers or placing them in separate rapid-advancement classes. Goddard and later researchers, however, found that this rapid advancement was not based on the “character and needs of gifted children” (p. 165). The focus of gifted education changed to creating a curriculum that nurtured the characteristics of the gifted learner. From a survey of introductory texts in gifted education, the author found that only 11% of the pages dealt with teaching basic academic subject matter. The author concluded that it is not what is taught but “from where it is taught and who is taught” (p. 177).

Morelock, M. J. (1996). On the nature of giftedness and talent: Imposing order on chaos. *Roeper Review, 19*, 4-12. This article traced the history of theoretical concepts, identified significant empirical studies, and proposed a theoretical framework for the field of gifted education. Morelock reviewed Galton, Binet and Terman, and Hollingworth’s conceptions of giftedness. While Galton, Binet and Terman all took a genetic view of intelligence, they all understood that environment as
sumed an important role. Hollingworth examined the social-emotional difficulties of gifted children and also emphasized the importance of those who nurtured their development. All viewed gifted students as having a “generalized capacity” that surpassed peers of similar chronological age and as needing support. The field was influenced by the research of Terman (the IQ test), Guilford (divergent thinking or creativity), the Marland report (federal definition), Feldman (child prodigies), Gardner and Sternberg (broader conceptions of intelligence), Vygotsky (social construction), and those who have studied IQ-independent and dependent abilities. The author concluded her article by comparing and contrasting the Talent Development Movement with the Columbus Group Movement. She concluded that both the concepts of giftedness and talent are social constructs, refer to different phenomena, and are educationally relevant.

Passow, A. H. (1986). Reflections on three decades of education of the gifted. Roeper Review, 8, 223-226. Passow reviewed the past history of education beginning with his 1954 Talented Youth Project at Teachers College. He suggested that the 1955 publication Planning for Talented Youth: Considerations for Public School might still be timely since the issues remain unchanged. While the launching of Sputnik produced interest, the Marland Report of 1972 could still describe the inadequacy of services to gifted students. It described the need for a “differentiated curriculum.” Passow then reviewed the history of “differentiated curriculum.” He first described four types of curriculum: general education, specialized, subliminal, and non-school. During the 1960s curriculum adaptations were divided between acceleration and enrichment. Only Ward (1961) related curricular adaptations to gifted student characteristics. Curriculum models that were popular during the 1960s and 1970s were mainly process-oriented and included Bloom’s Taxonomy, the Structure of the Intellect, Synectics, Phenix’s realms of meaning, creative problem solving, multiple talents, Tabo’s cognitive function, Kohlberg’s moral development, Renzulli’s enrichment triad, and Williams’ total creativity program. The only two content-specific models were Johns Hopkins SMPY and MEGSSS mathematics program. He concluded by saying that issues appeared to be perennial and that gifted educators will always need to concern themselves with “legislation, funding, mandates, etc. but then [without them] there would be no challenge and no excitement!” (p. 226).

Passow, A. H., Richert, E. S., Roedell, W. C., Roeper, A., Barrons, G., Braunstein, D., Doyle, P., & Lawson, S. (1988). Open forum. Roeper Review, 10, 212-218. This article summarized the opening session of the Annual Meeting of the Roeper Review Editorial Advisory Board. Passow indicated that educational reform has been encouraged since the early 1970s. By the 1980s, 13 reports had been published. Many of the reports address “excellence.” Excellence meant for individuals to perform on the “boundary of individual ability;” for colleges to set high expectations; and for society to be prepared to “respond to the challenges of a rapidly changing world” (A Nation at Risk, 1983; cited on pp. 212-213). John Gardner indicated that excellence related to actual achievement, the value of the field, and its encouragement. These reports did not address the education of gifted and talented directly but did stimulate a large number of state and local task force initiatives. The focus was on the establishment of more rigorous academic requirements. The participants believed that such focus on a common, rigorous curriculum might not result in an appropriate education for gifted and talented children.

Silverman, L. K. (1989). It all began with Leta Hollingworth: The story of giftedness in women. Journal for the Education of the Gifted, 12, 86-98. Silverman reported that the study of giftedness began with Sir Francis Galton’s Hereditary Genius (1869). Galton reported that males outperformed women on all dimensions. Hollingworth challenged Galton and many of the conclusions of earlier researchers. She concluded that “eminence and superior mental ability are not identical” since “sociological factors might limit achievement” (p. 92). While Terman was interested in the description of giftedness, Hollingworth was more concerned with their education. Hollingworth advocated special classes for gifted because she believed that enrichment in the regular classroom was mostly busy work. Silverman concluded that Hollingworth’s work is still a helpful guide for educators of gifted students today.

Tannenbaum, A. J. (1986). Reflection and refraction of light on the gifted. Roeper Review, 8, 212-218. This was the introductory article to a special issue that reviewed the field of gifted education for the past 25 years. Tannenbaum discussed four issues that continue to confront gifted education: IQ, provisions for gifted education, the nurturing of talent, and anti-intellectualism. He then described positive influences on the field such as increase in funding, leadership through the Leadership Training Institute (initiated during the 1970s), the development of graduate programs (Graduate Leadership Education Project), advocacy groups, instructional models, acceleration, and enrichment.

Torrance, E. P. (1986). Glimpses of the “promised land.” Roeper Review, 8, 246-251. In this article Torrance reflected on his career and ideas that he believed would continue without his presence. These ideas included future problem solving (initiated in 1974), the Torrance Tests of Creative Thinking (1966), international networks, the Torrance Center for Gifted, and his instructional model. He believed that other ideas that might still have an opportunity to be pursued included a broader concept of intelligence, creative reading, the teaching of research and inventive skills, sociodrama, the inclusion of the intuitive domain, intergenerational learning, the Sounds and Images tests, inclusion of creative instructional materials, and identifying areas that relate to gifted children’s interests. He concluded with ideas that have been rejected, ignored, or forgotten such as levels of consciousness, gifted disadvantaged, career-future awareness models, creative activities for the elderly, and the healing qualities of creativity.

Vialle, W. (1994). "Termanal" science? The work of Lewis Terman revisited. Roeper Review, 17, 32-38. Vialle reviewed Terman’s work within the framework of his time and space. She reviewed his positions on gender, race, social class, and intelligence testing. Given the hereditarian views of his time, Terman was interested in human differences and believed in special classes, special curricula, and special classroom procedures for “every form of exceptional talent” (p. 37).

Ward, V. S. (1986). Theory in the practice of differential education for the gifted. Roeper Review, 8, 263-271. At the beginning of this article, Ward presented five propositions on the field of Differential Education for the Gifted. He then reviewed the background history for these propositions. Beginning with his own dissertation research in the early 1950’s, he reviewed theory in actual form within these historical events: professional training in differential education at the University of Virginia, the Academically Talented Student Project of the National Education Association in 1958, the Southern Regional Project for Education of the Gifted, and the Governor’s School of North Carolina. He
concluded that the field had become politicized and needed to nurture new leadership and incorporate advances in the arts, sciences, and new technologies.

Zirkel, P. A., & Steven, P. L. (1987). The law concerning public education of gifted students. *Journal for the Education of the Gifted, 10*, 305-322. This article provided a comprehensive overview of law concerning the education of gifted students on the federal and state levels. The U. S. Office of Education established a section on Exceptional Children and Youth in 1931, yet interest waned until the late 1950s with the advent of Sputnik. Federal funding was redirected in the 1960s until the first federal legislation in 1969, the Gifted and Talented Children's Education Assistance Act. Congress passed similar acts in 1974 and 1978. The 1974 Act established an Office of Gifted and Talented and the 1978 Act defined "gifted and talented." The Office was dismantled when Reagan consolidated categorical funding into the Chapter II block grant program. Approximately 44 states had legislation or regulations regarding gifted students in 1980; 17 required IEPs and/or due process. The largest number of due process cases have been reported in Pennsylvania since it included "gifted and talented school-aged persons" under its 1975 regulations that defined "exceptional persons." The authors reported that most of these decisions have not enlarged the educational entitlement of gifted students. The difference between the advancement of handicapped students vs. gifted students can be attributed to the absence of a federal mandate.

Susan Johansen is Associate Dean of Scholarship and Professional Development at Baylor University. Editor of Gifted Child Today, she was the principal investigator of Project Mustard Seed. She is author of four tests that are used in identifying gifted students: Test of Nonverbal Intelligence (TONI-2), Screening Assessment for Gifted Students (SAGES), Screening Assessment for Gifted Students—Primary Version (SAGES-P), and Test of Mathematical Abilities for Gifted Students. She is a past President of the Texas Association for the Gifted and Talented.

(from ELAM, page 2)

Thank you to all of you parents who have supported education with countless volunteer hours. Thank you to all of you who led student enrichment programs, coordinated teacher appreciation luncheons, chaired parent support groups, conducted fund raisers, worked on committees, helped at school, and chauffeured flocks of children to multitudinous destinations. Thank you for giving of your time and yourself for the benefit of all of the children. Thank you for guiding and nurturing and parenting your own.

Thank you to all of you school administrators and support faculty who have championed the needs of all children including the gifted. Thank you for facilitating appropriate educational services for each and every individual student. Thank you for your expertise and your unswerving principles in the face of political whirlwinds.

Thank you to all of you legislators who have acted on behalf of educating all children to their individual maximum potentials. Thank you for your healthy debate and your deliberations. Thank you for your time and your endeavors enabling all children to strive toward their personal best.

Thank you to all of you community members who have endorsed education with your vocal advocacy, your supportive actions, and your informed vote.

Together, as we march toward the new millennium, we are steadfast in our commitment to our core focus, our blazing star. Our mission as the Texas Association for the Gifted and Talented is to promote awareness of the unique social, emotion, and intellectual needs of gifted children and to impact the development of educational services to meet those needs.

Develop the gifts, enrich the future.

(from LUCKSINGER, page 14)


Linda N. Lucksinger is an associate professor of education at Schreiner College in Kerrville, Texas, working in the graduate program. She obtained her Ph.D. in Educational Psychology with a specialization in Gifted and Talented Education from Texas A&M University in 1991. She has 15 years of teaching experience in K-12 settings and 8 years in higher education. She has worked with gifted learners from ages 3 through adult and serves as a consultant and presenter on gifted education issues.
of training delineated in SBOE rule represents the only additional training required for teachers of gifted students. If adopted, the amendment to SBOE rule 89.2 will further strengthen instructional services for gifted/talented students.

Accountability: Watchword for G/T Advocates
The appropriation rider approved by the Texas Legislature in 1999 requires TEA to develop an assessment system and statewide standards for gifted and talented students at all grade levels, beginning with high school exit-level standards for the performance of gifted and talented students in the areas of mathematics, science, social studies and language arts. With the exit-level pilot to be completed by August, 2001, this significant piece of legislation signals both challenge and opportunity for the gifted education community. Advocates must adopt "accountability" as their watchword, monitoring closely the first phase of the g/t legislation authored by Representative Scott Hochberg (Houston, District 132). Success in this first phase will ensure legislative support for moving on to the next-establishing statewide performance standards for middle and elementary gifted/talented students as part of the assessment system. Should the state fail to develop performance standards as part of a statewide assessment system to evaluate programs for gifted/talented students, accountability will continue to be a major problem statewide. Over time, the accountability issue could result in the loss of legislative support and, eventually, loss of funding for gifted education.

Naysayers have already begun protesting the standards development initiative, "Not another test!" They are correct; it is "not another test!" Rather, it is an assessment system based on statewide performance standards for gifted/talented students. We must not allow the purpose of this important legislation to be misinterpreted or negated by those who would deny gifted/talented students the same opportunity afforded all other children in the public school system-the right to an education commensurate with their ability, one that challenges them to the limits of their full potential. (Evelyn Hiatt, TEA director of Advanced Academic Services, will present an information session on the new "Standards Legislation" at the TAGT annual conference, December 1-4, in Houston).

Leading in the 21st Century
As we approach the new millennium, the need for a strong and courageous TAGT will be greater than ever. The extent of influence that TAGT may have on the future of gifted/talented students will depend on the quality of its leadership. Leading the nation's largest organization of advocates, dedicated to improving services to meet the unique needs of gifted/talented students, is an awesome responsibility...and an immensely rewarding one. Other states have looked to Texas for leadership in gifted education. What we are able to accomplish in our state for gifted/talented students will resound nationally. In a Leadership Edge Series monograph published by the American Society of Association Executives, author Sheila Murray Bethel identifies seven leadership skills essential for survival and success in the 21st century. Confirmed by a survey of hundreds of private and public sector organizations throughout the world, Bethel says heading the list is "servant leadership." Of all the qualities needed for success in the new millennium, association executives worldwide, agree that a commitment to service is the most vital. Other important skills for the 21st century leader include "creating and communicating vision," followed by "promoting and initiating change," "building partnerships," "valuing diversity," "managing information and technology," and "achieving balance." It has been my experience that nothing we have achieved for gifted/talented students has come without considerable challenge. I do not expect things to change in that regard. Therefore, the TAGT leadership must have the courage to make decisions in the face of uncertainty and to embrace challenge when the familiar is much more comfortable.

In retrospect I see how fortunate I was those first years with TAGT. I enjoyed the wise counsel of two venerable leaders, the support of the TAGT executive board, which included outstanding leaders in gifted education, and the backing of a strong, uniquely dedicated membership of parents and educators, wholly committed to the welfare of gifted/talented children. The passing of those early mentors notwithstanding, the support system is still in place and ready to work with my successor who will arrive on January 1, 2000. In this my final column for Tempo, much like the first one, I have struggled to find words-this time, words for my departure. At the brink of the new millennium, maybe just this-I am confident that by focusing on the future, retaining only the best of the past, TAGT will meet with untold success in its mission for gifted/talented children.
Q & A

ANSWERS TO YOUR QUESTIONS

Donna Corley

QUESTION: Help! My daughter is assigned to an AP class this fall. What does AP mean?

ANSWER: AP stands for Advanced Placement. It is a program that started out of a concern that high achieving students were not getting all of their needs met in the typical high school setting. Currently Advanced Placement classes are available for high achieving and gifted students. Since 1955, the College Board has assumed responsibility for the Advanced Placement Program. This program currently offers 32 courses, with more promised. Additional information on Advanced Placement can be found on the College Board Website at www.collegeboard.org. This site offers a tremendous amount of information ranging from the history of AP to how the AP courses and exams are developed, how grades are determined, how tests are scored, and how the data is analyzed. Related research articles are offered along with opportunities to order books for teachers, parents, and students.

QUESTION: I am an elementary G/T pull out teacher in a large district. I feel that I work with non-supportive regular classroom teachers and administrators who view my job as an "easy" job and who pull me away from my G/T duties to substitute in another class, etc. I have even been asked to answer the phones. Some regular classroom teachers resent the students missing TAAS practice. I teach art in the afternoon so I do not have a lot of flexibility in scheduling the G/T pullouts that are expected in the morning. Any suggestions?

ANSWER: Cooperation is born out of understanding and the sharing of a common goal. The administration at your school and the regular classroom teachers share a common goal with you and that is the success of the students. They may not fully understand how you are defining success for your G/T students. One suggestion might be to meet "off territory," in other words, in a neutral place that is not the administrator's office, not the regular classroom teacher's classroom, or your meeting area. All of you can discuss your goals for the coming year and how best to meet those goals. Take the time to identify like goals so that efforts to meet those goals can be coordinated and repetition eliminated. Many times professionals will be willing to shorten or even release certain instructional obligations if they see that it is too repetitive. If you have district and/or campus goals, this would be a good place to start. It is also important to identify goals that are different so that efforts can be made to support each other. (Be sure to use the Texas State Plan for the Education of Gifted/Talented Students from TEA and the District Effectiveness and Compliance (DEC) document when setting and prioritizing goals.) In the end, set a one to five year plan that will articulate everyone's goals for the students on your campus. It is at this stage that compromise will be called on by everyone. At minimum, this plan should outline the goals for the regular classroom and the G/T program, who is responsible, what is needed to meet those goals, a timeline, and evaluation. This should reduce some confusion and mis-understanding surrounding your challenging position.

QUESTION: Our district is starting to use portfolios in identifying students for gifted services. I have been asked by my son's second grade teacher to provide information on my son and a product to include in the portfolio. How should I begin?

ANSWER: Teaching Young Gifted Children in the Regular Classroom: Identifying, Nurturing, and Challenging Ages 4-9 by Joan F. Smutny, Sally Y. Walker, and Elizabeth A. Meckstroth (1997, Free Spirit Press), offers ideas in a ready-to-go format in Chapter One. There is a form that prompts narrative, a checklist of your child's strengths, and a teacher form that will give you ideas for a child's personal exhibit. Total Talent Portfolio: A Systematic Plan to Identify and Nurture Gifts and Talents by Jeannie H. Purcell and Joseph S. Renzulli (1998, Creative Learning Press), is primarily for teachers, but you might be able to get some ideas for the portfolio. Especially helpful information for your situation is found in Appendix C: Elementary Students, and Teachers, Assessment Criteria.

QUESTION: Please suggest some things that I can do to help identify some of my students' interests and/or talents.

ANSWER: There is a step-by-step book by Joseph S. Renzulli called Interest-A-Lyzer: Family Instruments (1997, Creative Learning Press). It is designed to walk the teacher through the administration and interpretation of interest surveys. The manual provides samples of the instruments and information on purchasing them.

QUESTION: I serve on a district G/T placement committee. We got into a discussion concerning what exactly to look for in talent identification across the grade levels. Do you look for different aspects of talent as the student progresses through the grades?

ANSWER: Joyce VanTassel-Baska in Excellence in Educating Gifted and Talented Learners (1998, Love Publishing Company), talks about how talents are usually exhibited through the school years. She begins by reminding us that very young children (3-5) may exhibit superior abilities in broad general ways. One might think of in terms of basic learning or in natural abilities such as verbal, spatial, musical, etc. As the child progresses through school, one might expect to see the talents become more specific to what we know more as the knowledge areas of school content, social, kinesiology, and fine arts curriculums. By middle school, the student is expected to be identifying their own talents, and preparing to enter the professional world in an area of strength and interest by making proper educational choices that develop those talents further. Care needs to be taken that we stay alert to indicators of talents that do not naturally assert themselves in a typical school setting. Our role as educators and parents is to recognize, nurture, facilitate, and support the talents that emerge.

QUESTION: What is the difference between a gift and a talent?

ANSWER: One of the best explanations addressing differences between gifts and talents can be found in Francois Gagné's Differentiated Model of Giftedness and Talent. A short but thorough explanation can be found in "Definitions of Giftedness and Talent", by Gagné in Roeper Review, Volume 20 No. 2, December, 1997, pages 76-85. This widely debated topic is treated in a clear and systematic manner by Gagné. He provides a succinct illustration of his model that addresses an exhaustive list of variables. It is his belief that natural abilities or gifts have certain influences working upon them that encourage or discourage the refinement of those gifts into talents. Gagné's challenge to those in the field of gifted education is to create a common conceptual edifice, beginning with the concepts of giftedness and talent. See also the TAGT publication, Raising Champions, by Michael Saylor.
BOOK REVIEWS


They Say My Kid's Gifted: Now What?, a service publication of the National Association for Gifted Children, is a slim but noteworthy book. It is designed as an entry-level book for parents who are unfamiliar with how schools operate and how they respond to gifted children. Its subtitle, Ideas for Parents for Understanding and Working with Schools, accurately describes the book's purpose.

The fifty pages of text provide a clear, concise overview of identification of gifted students, a synopsis of program prototypes and options in and out of the regular classroom, and how to appropriately deal with school bureaucracies. For "experienced" parents of gifted children, there is little new information, but for "beginners" in the field of gifted parenting and those who have not dealt with school systems before, this book is simple and user-friendly.

Particularly useful in this book are the appendices that follow the text. There is a short glossary of basic educational terminology, a chart of common characteristics of gifted children, a list of the advantages and disadvantages of various program options, and a list of selected associations for parents. The list of references is not only useful for parents, but would also be an excellent guide for a gifted specialist in building a professional library for parents and educators.

This book more than meets its modest goals and does precisely what I intend to do. For that, I highly recommend that this book be a part of any library for parents of gifted children.

—review by Tracy Weinberg


Sally Reis's new book, Work Left Undone: Choices and Compromises of Talented Females, does not provide comfortable reading. With research data and anecdotes drawn from personal experience, Dr. Reis challenges the perception of the most ardent feminists — not to mention the traditionalists — with evidence of the price society extracts from gifted women and girls.

Most chilling is the subtlety of messages even the most well-meaning family sends to its young girls: Ladies have nice manners, ladies are submissive, boys don't like girls who beat them, physics is too hard for you, the prom is where you can shine.

Work Left Undone begins with a look at the "Issues and Barriers Facing Gifted & Talented Women," exploring the choices women make in determining where their energy must lie during various periods of their lives. In adolescence they often must choose between being smart and being popular, running with the crowd or devoting themselves to their art. In young adulthood, women are often forced to choose again between focusing on their careers or on their families. As they grow older, women are expected to provide care for aging parents. With those kinds of choices often reduced to "My Work or Those I Love," women are unable to compete with men who focus their full energies on their careers.

In the second section of the book, "Case Studies of Gifted & Talented Females Throughout the Lifespan," Reis explores the phenomenon of gifted girls receiving lower scores than their male counterparts on standardized tests of math and science even though their grades in school are usually higher. Do girls do less well because they expect to be beaten by boys: are they intellectually inferior, or is sexual bias in instruction and expectations the cause? Reis looks at each factor, realizing that additional research is needed before the question can be definitively answered. Interviews with numerous girls did, however, reveal that the girls themselves attribute the boys' success to intelligence while they attribute their success to hard work, not natural ability.

Finally, Reis offers "Solutions and Recommendations" that range from helping girls to change the image that they have of themselves through sweeping changes in the media to the establishment of strong support systems for women both within and beyond the family. A concise recommendation of what gifted and talented girls, their parents, teachers, and counselors should do as well as an extensive list of resources provides a common sense map to the future. There is indeed a great deal of "Work Left Undone" in helping gifted women and girls maximize their potential, but in this well-documented work, Sally Reis makes a significant beginning.

—review by Millie Hickman


At last, a quality book about philosophy for young adult readers! In this excellent book, Jeremy Weate (doctorate in European philosophy from University of Warwick, England) makes the leading figures in western philosophy understandable and attractive to the young reader. The introduction presents some basic philosophical concerns in easy to understand terms: Why am I here? Am I dreaming? What is good and bad? It also includes contemporary questions such as: Is a computer virus alive? Am I an android? Is time travel possible?

The first section is a history of western philosophy through the lives of great philosophers including Socrates, Plato, Aristotle, Hypatia, Descartes, Kant, Hegel, and more modern figures such as Simone de Beauvoir, Derrida, and Marcuse. Each person is covered on two facing pages, with fascinating illustrations by Peter Lawman. Basic philosophical ideas are presented along with a significant quote. Historical and interesting biographical information are included, and photographs and period illustrations help put the philosopher in historical perspective.

A detailed description of the schools of philosophy follows, showing, for example, that Aristotle was a Materialist, but pointing out that so was Karl Marx. Other schools discussed include Idealists, Pragmatists, Rationalists, Phenomenologists, and Feminists. A concise glossary, with explanations of various terms and expressions used by philosophers, closes the volume.

For middle and high school students, this book provides an excellent introduction to the field of philosophy, and to some of the greatest minds of the past; it also points out how philosophy is a vital part of everyday life. As a class text or reference, this engaging book will assist students in dealing with abstract concepts.

—review by Michael Cannon
I n the process of putting this issue together, I was talking with a colleague from out of state who referred to Texas as the "promised land of gifted education." I was at first surprised by this label, in light of the problems and difficulties we face in trying to provide a challenging education for gifted children. But on reflection, I decided that perhaps it is somewhat appropriate. After all, we have the Texas State Plan for the Education of the Gifted/Talented and the legislative mandate for services. While not the Ten Commandments or even the United States Constitution, they are certainly provide a focused direction and a strong vision for educating the especially able learners in the state.

But as helpful as these documents are, they may stimulate a tendency toward complacency, an unspoken satisfaction that, yes, things are pretty good for gifted education in Texas. Not that we aren’t aware of problems or that we don’t understand the need to be constantly vigilant. On the whole, however, we pretty much feel that we know what giftedness means and how it should look.

Sometimes this can lead to a certain narrowness of outlook on the subject of gifted education. If we know perfectly how gifted education should look, then we may be less open to a different perspective. We advocate activities for children that provide opportunities for divergent thinking, but may find divergent views on gifted education somewhat threatening.

Oddly enough in such a democratic society as ours, we are at times loath to listen to other opinions. But is the imposition of a single viewpoint ever really justified?

Different views enable us to continue to make progress. As Sir Karl Popper, the Austrian-born British philosopher, noted in The Open Society and Its Enemies (1966), “A society that allows critical discussion and opposition will almost certainly be more effective at solving the practical problems.” Criticism, implied or overt, is one of the chief ways that we can continue to make progress in our understanding of gifted students. It is often the radical view, the proposal that seems to attack all that we hold to be essential, that either spurs us on to examine our beliefs, or makes us see the flaws we had ignored in the past.

Progress in G/T education, as in any field of knowledge, comes not from piling up more and more certainties to prove what we already believe, but by being ready to replace the current idea with a better one when the evidence supports it. The creation and perpetuation of an ideal system for educating gifted learners is neither justified nor, in reality, possible.

In Mary Chase’s play, Harvey, the character Elwood P. Dowd (friend of the giant eponymous rabbit/pooka) finds himself at the center of a potentially disagreeable controversy, and he looks at it, not as a problem, but as an opportunity for involvement of all concerned. “An element of conflict in any discussion is a good thing. It means everybody is taking part and nobody is left out. I like that.”

Not a bad way to approach a difference of opinion.
### Spring 2000 Evaluation and Assessment

Assessment and evaluation are recurring processes in G/T education, whether in identification, programs and curriculum, or student performance. Articles addressing the evaluation and assessment of students in G/T programs, evaluation of programs and/or curricula, and assessment elements of identification are only some of the possibilities for contributors.

The deadline for submission of articles is **December 1, 1999**.

### Summer 2000 Issues in Curriculum for Gifted Learners

Curriculum is one the key elements in G/T education and it has been approached in a number of ways. What are the most successful models? What new possibilities are there? What are the big issues and concepts in curriculum today? Which models/approaches are in contention and why? Thoughtful articles dealing with all gifted curriculum issues are welcome.

The deadline for submission of articles is **March 1, 2000**.

### Guidelines for Article Submissions

*Tempo* welcomes manuscripts from educators, parents, and other advocates of gifted education. *Tempo* is a juried publication and manuscripts are evaluated by members of the editorial board. Please keep the following in mind when submitting manuscripts:

1. Manuscripts should be between 1000 and 2500 words on an upcoming topic (see topics above).
2. Use APA style for references and documentation.
3. Submit **three copies** of your typed, double-spaced manuscript. Use a 1 1/2 inch margin on all sides.
4. Attach a 100-150 word abstract of the article.
5. Include a cover sheet with your name, address, telephone and FAX number and/or e-mail address.

Send all submissions or requests for more information to:
Michael Cannon, TAGT Editorial Office, 5521 Martin Lane, El Paso, TX 79903

### Texas Association for the Gifted and Talented Membership Application

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**Institutional members receive all the benefits of regular membership, plus may send four representatives to all TAGT conferences at the member rate, regardless of individual membership status.**

In addition to your regular Membership, you are invited to join a TAGT Division for an additional fee. Choose either or both:

**G/T Coordinator** $10 ( )
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**Return form and dues to:** TAGT, Dept. R. B. #0471, P. O. Box 149187, Austin, TX 78789-0471.

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<td>(254) 799-5537</td>
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<tr>
<td>702 Greenwood Lane,</td>
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<tr>
<td>WACO, TX 76705</td>
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<tr>
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<td>DONNA COLEBY</td>
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<td>JOE MOORE</td>
<td>250 West Avenue P</td>
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<td>3400 North Highway</td>
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<tr>
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<td>Paris, TX 75460</td>
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<td>3001 North Freeway</td>
<td>P.O. Box 28197-5566</td>
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