What does education often do? It makes a straight-cut ditch of a free meandering brook.
- Henry David Thoreau

In most texts on education of gifted students, there is usually a list of characteristics of effective teachers of the gifted, and Renzulli (1980) over thirty years ago questioned this practice, and suggested that educators focus on teacher behaviors; and I would suggest that we focus on student-teacher interaction. Gifted students absorb information best when they discover it themselves and make it their own. As educators, we have an obligation to support individual student paths to knowledge, and not to restrict meandering approaches to learning (Alpert, 2003). Many gifted students have a meandering approach to learning, and teachers who are willing to support this approach can co-create “rich tasks” with their gifted students. Perkins (1992) suggests three criteria to guide the development of rich tasks: 1) Does the task focus on a discipline? 2) Does it provide connections to a real-world context? and, 3) Is the task accessible to the students? Rich tasks provide opportunities to address open-ended exploration of questions or topics, and to learn the language and procedures of a discipline.

Designing rich tasks to facilitate meaningful learning for gifted students may appear daunting to some teachers; however, a useful tool to create powerful and focused curriculum is the
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FROM THE PRESIDENT
Judy Bridges

In this issue of Tempo, we focus upon teachers of the gifted. Those who truly teach the gifted deserve our loudest praise because they make extraordinary opportunities into standard fare for their students, and they remove the ceiling for the most gifted in their classrooms. What distinguishes these teachers from their peers? How do their classrooms differ from the other classrooms in their buildings, districts, or states?

A great teacher is also a great student. Without the habits of lifelong learning or scholarly behaviors as outlined by Sandra Kaplan, progress eventually slows, holds for a period of time, then stops, and without renewal never rebounds. In a radio interview about his new book, *Up Your Business*, Dave Anderson described the syndrome that often prevents greatness by stating the greatest enemy of “great” is “good.” This syndrome applies in education as well as the business world. Often we work our way to a level of competency for which we achieve recognition for our accomplishments. Achievement of that level requires time, energy and sacrifice, so we take a little time to “smell the roses.” During that respite, we become satisfied with “good” as well as the comforts of good, and the energy required to move to “great” looms like the struggle at the beginning of our careers. Many decide that “good” is “good enough.” Unless some experience reignites the fire, we forget the passion that brought us to the field. What I would wish for all teachers is the inspiration to become “great”—the inspiration to become good stewards of advanced ability as defined by Carol Ann Tomlinson.

Hopefully, each of us is afforded opportunities to rekindle the flame through inspirational as well as pragmatic staff development. Too often, we find and utilize episodic events that mimic good practice because they are showy and cute, but the content is often only slightly recognizable or entirely missing. We must fine tune our quality detectors so that students (see BRIDGES, page 30)
Gifted Teachers: Leading and Letting Go

Teachers of gifted students are well aware of the stages of learning that lead to expertise. These stages have been outlined by such luminaries as Alfred North Whitehead in his 1929 “The Rhythm of Education” and Benjamin Bloom (Editor) in the 1985 “Developing Talent in Young People.” The stages also shed light on the novice-to-expert literature of the past 15 years. There is no mystery how learning progresses, but it can be useful to review the role teachers play in facilitating and sometimes nearly forcing learning on students.

Generally students of all ages and across all content areas begin with a playful interest in a subject. Learning in this stage is characterized by curiosity, fascination, or fun. Good teaching in this romantic stage of learning stresses open-ended, low-stress exploration of ideas and activities. In gifted education teachers provide such opportunities through broad enrichment activities that may ignite the passion of learning in a student. Dr. Renzulli creates such exploratory options through his “Type I” activities. Some teachers are naturally skilled at making learning playful, exploratory, and fun. It’s no surprise that stereotypes of good primary school teachers include patience, playfulness, and rooms that provide hundreds of stimulating colors, ideas, and experiences for students to explore.

Many primary school teachers of the gifted have students that are ready for the second stage. Therefore they use teaching strategies not generally seen in primary schools. Sometimes other educators in the school don’t understand that these teaching practices are the right ones for certain students in certain content areas. While there are some children that truly are “hurried,” others are simply experiencing teaching and parenting matched to their stage of learning.

The second phase of learning is as different as night and day from the first. This stage requires precision—mastery of the vocabulary, rules, and discipline of a field. In this stage, musicians drill on scales until they are second nature. In schools, teachers push students through the drills necessary to memorize math facts and spelling rules.

In gifted education, students sometimes are ready for disciplined practice on the basic elements of the curriculum at a younger age, so young gifted students may be ready to memorize multiplication tables in the first grade. Sometimes teachers of the gifted find co-curricular content in which to offer students playful introductions leading to precision. Critical thinking skills, the rules of logic, and mnemonic devices have often been used by educators of the gifted. The learning of expansive vocabulary expanding on the content of their general classes proves useful for some students. There are always new areas of human experience to explore, so it is of utmost importance that teachers of the gifted accurately interpret when each child has explored a field sufficiently and has sufficient interest that they would embrace the discipline and rigor of the second stage of learning.

(see MCINTIRE, page 31)
Courageous and Conscious Teaching

Diane Montgomery

Many questions come to mind when thinking about the characteristics and nurturing of the teachers who are responsible for the education of the gifted: What is different about teaching the gifted from teaching other children? What makes a good teacher of the gifted? What is the necessary professional training and at what level? What is required in various states or countries? How much training beyond that for general educators is necessary? Does one have to be gifted in order to teach the gifted? Emphasis on the teacher, her role, characteristics, teaching strategies, approaches to teaching, and needs for continued professional development have been topics of many discussions and research studies. Although a quick library search will yield dozens of responses to these questions, not very many of the investigations have been connected to the well being of the students (Coleman & Cross, 2001).

These are not new questions, but rather ones that have been asked for decades by the pioneers in the field of gifted education. In the 1960’s, Gold (1965) emphasized the need for in-service education to assure the skills needed for teachers. The 1970’s brought key contributions, such as Frasier’s (1977) differentiating teacher preparation to focus on the need for teachers of the gifted to be good public relations advocates for their students. Barbe and Frierson (1975) provided evidence illustrating the need for a different approach to teaching, one that is process-oriented by a motivated learner as teacher; and Seeley (1979) presented the competencies needed by teachers of the gifted. Renzulli (1977) emphasized teacher development as the top priority in successful programs for gifted; and some studied (Gear, 1979; Milgram, 1979) what gifted children reported as preferences. In 1980, an influential book series directed by Tannenbaum and edited by Neuman released the Lindsey publication describing the state of the art for preparation of teachers of the gifted. The 1980’s brought detail about the philosophy, traits and competencies needed (Addison, 1983; Feldhusen & Hansen, 1988; Schnur, 1980; Story, 1985), student perceptions (Lewis, 1982; Dorhout, 1983; Maddux, Samples-Lachmann & Cummings, 1985) and evidence of excellence in teaching the gifted (Whitlock & DuCette, 1989). The 1990s further defined effective teachers for specific groups of gifted children (Abel & Karnes, 1994; Wolfe, 1997). Yet today, there is continued, strong emphasis on the importance of specialized teacher development (Croft, 2003; Knobel & Shaughnessy, 2002) and multicultural competence (Ford & Trotman, 2001).

Standards for university programs that prepare teachers of the gifted are undergoing updating and improvement by a committee composed of national leaders in gifted education. Through a collaborative effort of the two national-level professional organizations, The Association for Gifted, a division of the Council for Exceptional Children and the National Association for Gifted Children, the committee examines the research and applies theoretical principles to determine the outcomes for teachers graduating from teacher preparation programs. The accrediting body for teacher preparation programs (NCATE) is facilitating the development of
There is a need, however, to integrate this body of knowledge on teachers of the gifted with recent pleas for a depth of meaning in education (Miller, R., 2000; Palmer, 1998) and meaning in gifted education (Heng, 2003). This discussion will detail the essential ideal for teachers of the gifted in two areas not found on the standards lists: courage and consciousness. Teachers of learners who have gifts, talents or high potential are a courageous lot! In addition to the traditional long list of competencies needed to teach children, those who experience the most satisfaction in their work may at the same time experience the most angst. We know that creative learning requires creative teaching (Rejsking, 2000; Torrance, 1962); we know that asking appropriate high level questions encourages high level thinking (Schiever, 1990); we know that differentiating curriculum must be based on the learner strengths identified (Croft, 2003); we know that equity issues and barriers are created by our schools’ policies and practices (Ford, 2003). What an overwhelming job!

**Courage**

On another note, Palmer (1998) says “good teachers possess a capacity for connectedness” (p. 11). To what must the teacher connect? The highly sensitive teacher connects to each child, to their families, the community, and society. The depth of the connection on many levels is for the benefit of the child. The message is that we “teach who we are” (Palmer, p. 1). We share the excitement of our own creative spirit as we practice our art. The arts for teaching is a love of learning, a love of expression in the arts, and a love of humanity. We have the courage to bring our hearts into the classroom. We practice compassion, empathy, intuition, insight, and the capacity to listen. We work on our own emotional development to be able to pave the path for our students to grow individually and collectively. The deep meaning, the “heart” that Parker Palmer begs teachers to show in our classrooms, is easily recognized by teachers who practice it.

Why do teachers choose to teach gifted? Piirto (1999) has observed in a state that requires a specialized licensure to teach gifted (Ohio) that many teachers enter the field accidentally, perhaps without the long-burning goal to make gifted education a life career. She contrasted this observation with the altruism that was a characteristic of the Armenta (1997) and Coleman (1994) studies for teachers of the gifted. Rather, Piirto observes that some teachers were in the right place at the right time and wanted to work when an opening for teaching gifted was available. Piirto believes that it is likely that teachers may mature into altruistic teachers or they might change careers or take another teaching job. Perhaps, it is the teachers who stay that are the courageous ones.

**Consciousness**

Another essential requirement for teachers of the gifted is consciousness in the classroom. The first step in developing a conscious classroom is to learn awareness. Schultz (2001) calls for gifted awareness training for undergraduate preservice teachers. The vision is that teachers in training will learn more about the nature of schools and the students who attend them. Beyond this initial awareness of individual differences and a knowledge that curriculum must be differentiated is the practice of reflection. Maintaining reflective teaching journals on teaching technique, plans, and subsequent student outcome promotes awareness of how students respond differentially to what occurs in the classroom and school. Conscious teaching means an acute awareness of the deepest level of meaning for students, and both includes and transcends reflective teaching practices.

The deeper levels of our existence relate to those influences in our lives of which we are not fully aware. Often students will be unaware of the personal and collective unconscious motivations for their behavior or thoughts. So, it may not be adequate to say, “Are you OK?” when you detect deep issues arising for a child. This is a closed question that can too easily be dismissed. It commonly is asked without regard to any response; and it may be unanswerable. But, there are many ways to help students increase their awareness and be more conscious of the influences in their lives, including studies in school, friends and family. This sensitivity has often been listed as a characteristic of gifted students (Clark, 2002; Silverman, 1993) and recently accorded its own type of giftedness, spiritual or emotional intelligence (Piechowski, 2000, 2003; Salovey & Mayer, 1990).

(see MONTGOMERY, page 16)
Leadership Development Program Fulfills Gifted Students’ Need

Monica Florida

Gifted individuals have high intellectual, creative, divergent, and problem solving abilities (Davis & Rimm, 1985; Sisk, 1993; Tannenbaum, 1983). The federal definition of gifted identifies five areas in which the gifted and talented excel: intellectual ability, creativity, academic achievement, leadership, and visual/performing art abilities. Of these areas of giftedness, leadership is the least discussed (Karnes & Bean, 1990; Sisk, 1990).

Although much financial, research, and educational support is committed to adult leadership development, little effort or financial commitment has assisted our youth in realizing and developing their leadership abilities during their formative years (Carpenter, 1996, p. 17). Few gifted programs identify students with high leadership potential or include leadership education as part of the designated curriculum within present programs for the academically gifted (Florey & Dorf, 1986). Additionally, many researchers (Foster, 1981; Karnes et al., 1987; Magoon, 1981; Marland, 1972) denounced the paucity of attention and effort expended to assist our gifted youth in reaching their leadership potential (Carpenter, 1996, p. 17).

Because GT adolescents are generally considered to have the maturity to internalize their experiences and are young enough to be open-minded and curious (Black, 1984), they realize the maximum benefit from the opportunities to participate in a curriculum that fosters independent thinking, promotion of decision-making skills, exploration of various leadership styles, and other activities that help them realize their leadership potential (Carpenter, 1996, p. 11). Torrance (1962) emphasized the importance of youths’ creative imagination for the survival of civilization. He also stressed that democracies fail when they do not use intelligent, imaginative problem-solving methods. Because gifted individuals often have high creative, intellectual, and problem solving abilities, Torrance’s assertions have lent support for the leadership education of gifted students (Carpenter, 1996, 11-12). The Marland Report (1972) established the premise that offering differential educational provisions was essential if democratic education intended to provide appropriate educational opportunities to benefit students and society. These educational opportunities offer GT students the differentiated curriculum that will permit individuals to have equal opportunity to become productive citizens who can contribute to the best of their ability to society (Carpenter, 1996, p. 12).

Our democratic system promises to each individual, without discrimination, the opportunity to develop as an individual to the extent of that person’s abilities, talents, and motivation. Only through special programs for gifted and talented individuals can this goal be achieved. Not only do gifted and talented students benefit from specific programs that recognize and cultivate their talents, but also society benefits because today’s gifted and talented students are prime candidates to be the future leaders in political, business, research, and artistic endeavors. Although the
egalitarian society of the United States places a high value on the individual and the realization that progress involves the efforts of all citizens, the reality is that the ideas and plans for progress come from a few of its most able members (Sisk, 1987).

Leadership education is appropriate for GT students because they possess above average or high intelligence, one of the traits most often cited as a trait of a leader. GT students have the ability to comprehend and retain the learning experiences and the sensitivity to perceive the acquisition of the leadership skills and roles in themselves and others (Magoon, 1980). Thus, they are likely to profit from leadership education.

Education in Action is a 501(c)(3) non-profit organization that fulfills this need by providing leadership development opportunities for gifted 6th-8th students. Education in Action's experiential learning programs empower young Texans to be informed and active leaders. Education in Action's weeklong Lone Star Leadership Academy-Austin and Lone Star Leadership Academy-Houston/Galveston programs extend core curriculum taught in Texas classrooms through visits to historically, politically, environmentally and scientifically related sites. Leadership development activities are carried out throughout the program curriculum with a focus on a different leadership skill each day.

During visits to sites, students learn about leaders of Texas, past and present, and note what qualities made these Texans effective leaders. For example, students learn about the heroes of the Texas Revolution at the Bob Bullock Texas State History Museum, Lyndon Baines Johnson at the LBJ Library and Museum, and their State Representatives and State Senators during visits to their offices at the Texas State Capitol. Each evening, students meet in leadership groups with their facilitator (a state certified teacher) to share and discuss the leadership qualities they learned about during the site visits and through interactions with other participants.

Leadership groups are also the time when students participate in leadership activities and content-related simulations that teach effective leadership skills and concepts. For example, a simulation from the Lone Star Leadership Academy-Austin program focuses on the ability to lead a group to consensus on a controversial issue. Prior to rafting down the Colorado River, students learn about a conference center being built on the river. Each student is assigned the role of a different community member. Students read actual newspaper articles to provide them with the viewpoint of their assigned community member on key issues including the environment, quality of life and tax abatements. During the rafting program, students see the site and visit with the rafting guides to learn more about the situation. Students then return to their leadership groups and are challenged to build the conference center in a way that is acceptable to the entire group.

Upon completion of the Lone Star Leadership Academy program, students are invited to participate in Education in Action's alumni program, the Lone Star Youth Leadership Council. This organization encourages and motivates Lone Star Leadership Academy graduates to continue their leadership development. Texas leaders talk with members about effective leadership qualities at alumni program meetings. The alumni program also provides opportunities for members to exercise their leadership skills. Lone Star Youth Leadership Council members develop and implement service projects in their schools. Students display their service projects at Education in Action's Annual Texas Independence Day Celebration. Members also work together on committees to plan Education in Action's Annual Texas Independence Day Celebration. Finally, members may return to Lone Star Leadership Academy programs as Youth Facilitators.

Education in Action was founded to provide Texas students with opportunities to develop their leadership abilities during their formative years. Because leadership is one of the five areas of giftedness, gifted students are excellent candidates for the program. Education in Action invites educators of the gifted to nominate students for participation in the Lone Star Leadership Academy. In order to participate in the program, students must be in the 6th, 7th or 8th grade, maintain an 85 or higher average, receive an educator recommendation/nomination, and demonstrate leadership potential.

For more information on Education in Action's leadership development programs or to nominate outstanding students, visit www.eiatx.org or contact (see FLORIDA, page 19)
Parents and teachers often wonder how much self-direction they should ask of their gifted children. A critical crossroad is predictably encountered as the work of the older child becomes more differentiated and individualized. The reality of the twenty-two plus student classroom disallows constant guidance for the gifted few it may contain. Consequently, students need to become increasingly autonomous—working on a carefully sequenced acceleration of skills and open-ended enrichment projects. While they may possess the desire to learn, many gifted children lack the self-confidence and the level of trust necessary for success.

The development of the autonomous student demands a reliance on symbolic abstractions as well as the confidence in one’s ability to understand and correctly manipulate these numbers and letters. Computation, composition, and logical reasoning permit the written communication of insight and ideas. Letters and numbers are the simple symbols necessary for abstract representation. The development of self-confidence and trust in the permanence of communicative symbolism joins teachers and parents of gifted children as partners in the lifework of the realization of autonomy.

Gifted children often develop a permanence of symbols at a very young age but many are surprisingly reluctant to take the final step of autonomy. The gifted individual’s constructed perception of reality differs from others, making a trust of permanence more difficult. (Derrida, 1973) Risk taking becomes confusing, even dangerous to the esteem, when the child encounters differing views and reactions to his unique perceptions and connections. From the constructivist viewpoint, reality is based on perception and shared agreement of meaning via communication. The perception of the gifted child differs in depth and complexity from his age peers. If the “check” of correct perception confirmed through communication leads to confusion or disallows his viewpoint, the gifted child questions his ability to accurately “decode” the world. This builds the opposite of trust. It lowers self-esteem and leads to an insecurity and lack of self-confidence. What is evident is that many gifted children need help learning the skill of autonomous learning.

Protecting the self-esteem of the child is important. It is much like protecting the child from bodily harm. (Briggs, 1970) Parents and teachers have to consider risk situations carefully and actively teach their children protection strategies to keep them from harm. Allowing for risk is the greatest, yet inevitable challenge. The autonomy of the grown child is, after all, the ultimate goal. Structuring risk balances the skills and development of the child with the consequences and possibilities of failure. If the steps the child dares to take alone, whether successful or not, are encouraged by the continuance of esteem building interactions the child learns that guided risk is acceptable. Both success and failure provide valuable lessons.

Children in supportive, self-esteem building educational environments simply learn more. The children
trust that the teacher has calculated the risk of failure with the development of the child in mind. They trust that a safe community has been built on common expectations and that they can dare to learn in a public forum free of ridicule. Procedures and routines are predictable. (Kovalik, 1996)

A class of gifted children creates a special challenge. Their balance of educational and socio-emotional needs is unique. The older the children become the more their gifts become individual. If they are to thrive, gifted children need a different curriculum than do other children. Simply put, differentiation means advancement of pace, depth, and complexity along a learning continuum. Several may be at a similar location allowing for grouping, others may be alone. Multiple groups emerge and change as the school year progresses. All groups receive direct instruction and immediate feedback. All groups also work independently allowing time for others to share, one-on-one, with the teacher. The teacher becomes a facilitator of learning, a guide on the side - rather than a sage on the stage. (Renzulli, 1986 & 1992)

In order to allow students the opportunity to continue to be challenged at an appropriate level, GT teachers are required to have superb planning and evaluation skills. GT children in the regular classroom need to be autonomous learners. They must take a portion of the responsibility for their own advancement. (Treffinger, 1978). An assessment system must be devised that allows the child to see progress and directs the child to the next assignment independent of the teacher.

Teachers can facilitate autonomous growth by providing clear expectations and structuring daily tasks the student can accomplish independently. Allowing students to interpret written instructions for a task on their own fosters a trust in the symbolic representation of communication. Objectives and activities checklists guide students who must work independently to task completion. Time allowances help students remain on task. Research contracts provide students with clear guidelines and offer a direction for independent inquiry studies. Open-ended rubrics allow students to self-evaluate their work without placing limiting ceilings on their accomplishments. Ongoing teacher-student conferences provide security to autonomous learners. When conferences are predictable and scheduled in advance, the student knows there will be an appropriate time to share his achievements and collaborate on future plans. Such conferences are an excellent opportunity for genuine praise and guidance in the development of autonomy. They also allow a forum for modeling the adult autonomy as the student and teacher share experiences of life-long learning.

Parents can help younger children to develop autonomy by asking them to complete a series of tasks without repeated directions. See if your child can hold up to seven simple directions in order and complete them. Allow the child to rearrange the order of the tasks to meet their needs. Praise children for self-reliance and spontaneous acts of kindness given without being asked. Older children can complete more complex, simultaneous tasks. Ask them to complete a non-cook recipe without help or build a multiple step structure without written directions, but be ready, many will be unable to begin without your direction. Develop critical reading and writing skills through an analysis of form and description. To reassure the child of correct symbolic interpretation, have him draw an accurate reproduction of a figure based on a written description. Have older children craft carefully written descriptions, and then have you draw exactly what they wrote. This exercise develops critical observation, self-confidence, and symbolism trust as the child actively works to produce an accurate symbolic representation. The risk is structured so the child can succeed.

Active teaching, like active parenting requires that we initiate safe risk situations in which we control the order and severity of life’s predictable consequences. It builds self-esteem through a series of successes and failures orchestrated on a backdrop of unconditional love. Our guidance must be structured to lead to self-confidence. Our children have the need to become autonomous learners; we owe them nothing less.

REFERENCES

Understanding by Design model. This model developed by Wiggins & McTighe (1998) includes many of the strategies suggested by gifted educators (Maker, 1982; Kaplan, 1986; Sisk, 1987), including the exploration of important ideas and questions that Wiggins & McTighe call "enduring understandings," and Kaplan (1986) and Sisk (1987) call "key concepts" for the first stage in curriculum design. In the second stage, teachers use these "enduring understandings" to assess how well their students have learned the material, and to identify opportunities for the students to apply knowledge and skills learned in authentic and relevant contexts. In the final stage, teachers can ensure effective instruction by identifying activities and resource materials to support engaging learning and promote further exploration of the enduring understandings. In designing a curriculum for gifted students, the following format (figure 1) is useful:

<table>
<thead>
<tr>
<th>National and State Standards</th>
<th>Enduring Understandings</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content topics</td>
<td>Key Skills</td>
<td>Essential Questions</td>
</tr>
</tbody>
</table>

(Figure One)

Understanding by Design helps teachers use and make sense of standards by identifying the big ideas or enduring understandings in the standards, processes, related facts, and skills. Texas and Virginia have created Social Studies frameworks using this model, and the model is being used at Lamar University to design Science curriculum in a Jacob K. Javits Educational Program Grant project supported by the Department of Education.

A complementary strategy to the Understanding by Design model is the use of WebQuests, which are inquiry-oriented activities in which some or all of the information that learners interact with comes from resources on the Internet (March, 2003). WebQuests focus on open-ended questions, such as: How can we create nonviolent schools? In the WebQuest Crool Zone, students work on understanding the nature and extent of school violence, and role-play the multiple perspectives of students, teachers, parents, or counselors to propose solutions to violence in schools. The authentic task is to propose a plan for creating nonviolent schools that can be presented to a real-life audience, and to apply the plan to a community problem, such as a community center that has been a target for violent behavior, or a school with excessive student behavior problems. (www.kn.sbc.com/wired/nonviolence/intro.htm)

Research on Effective Teachers

An analysis of the research on effective teachers of gifted students in the United States (Bishop, 1980; Dorhout, 1983; and Abel and Karnes, 1994), in Israel (Milgram, 1979), and in New South Wales (Vialle & Quigley, 2003) indicates that Bishop’s students in a residential Georgia Governors Honors Program identified a combination of intellectual and personal characteristics that characterized successful teachers. The students of Dorhout (1983) and Abel & Karnes (1994) identified the personal-social characteristics of effective teachers; whereas, Milgram’s (1979) students had a strong preference for the intellectual qualities of the teacher. Vialle & Quigley (2003) in preliminary findings of their study report that personal characteristics of teachers were highly regarded by their high school students on a questionnaire, but that open-ended statements of the students, indicated that personal qualities were linked with intellectual characteristics and the teaching strategies of the teachers.

This analysis led to the current research effort to find out what the perspective of high school gifted students in Texas were toward effective teachers, and what characteristics they would identify. Effective teachers were defined as teachers who helped students learn in depth and experience the feeling of success...
that comes from meaningful learning. A questionnaire was designed that asked gifted students from throughout the state of Texas, former participants of the Texas Honors Leadership Program (THLP) to list five characteristics of effective teachers, and to write a short paragraph describing a learning experience focusing on an effective teacher in action. A random sample of students from four years of the summer residential program for gifted students at Lamar University (2000, 2001, 2002, 2003) was selected, twenty-five students from each year; and a questionnaire was mailed to them, requesting a reply as soon as possible. The return rate for the questionnaire was remarkably high (70%); however, it is important to point out that these gifted students have a “real stake” in helping to ensure that other gifted students have similar learning experiences. As one student said in her cover letter:

“I’m so glad that you gave me the opportunity to respond to your questionnaire, when I recall how effective my sixth grade teacher of the gifted was, and how indifferent some of the others were... I just wanted to share that with people who might be able to change things, so that all teachers might become more like her. If will be eternally grateful to her for her teaching, she made a difference in who I am.”

The ten characteristics of an effective teacher identified by the students include:

**Knowledgeable**
**Passionate about Learning**
**Understanding of Giftedness**
**Caring**
**Sense of Humor**
**Enthusiastic**
**Sensitive**
**Fair**
**High Energy**
**Ethical**
**Respect.**

Each characteristic was nominated by at least 35 of the gifted students who returned the questionnaire, and the following descriptive paragraphs illustrate the characteristics of effective teachers in interaction with their gifted students. The students identified intellectual and personal-social characteristics.

**CARING**

“I grew up living with my grandparents, and growing up without parents, and always being the smallest kid in the class was not easy for me. But my most effective teacher in the 5th grade gifted program helped make school a place where I could be special. One thing I remember was an activity where she chose one student to be honored each week, and the other students wrote one thing they liked about the chosen student on jelly-jar labels. Then each student placed those statements on a strip of paper that our teacher pinned to our shirt. I still remember wearing that strip of paper all day with comments like “I like the way you always help me when I need it” or “Your stories are always so interesting.” She always knew how to have us work with activities that made you feel good about yourself and others. She cared about us.”

“Caring is how I would describe my high school Physics teacher. Physics was my favorite class, I loved the labs and figuring out the exercises. When my father died, I told him I was going to have to quit school to help support my mother and the family. He tried to talk me out of quitting school, but he also encouraged me to get my GED in the evening. I got a part-time job with a landscaper, mowing lawns and planting shrubs etc. I started working on my GED in the evening, and when I received it, I decided to enroll in a junior college to take a night class. I wrote and told him, and he sent me a check for my tuition. That really made me feel he cared about me as a person, not just as a student.”

**KNOWLEDGEABLE**

“My most effective teacher of the gifted was so knowledgeable—he knew everything about the Civil War. When we studied the Civil War, the class was divided into the North and South by a Mason-Dixon line running down the middle of the classroom. The students sat on our respective sides, and we had to research all the facts to participate. We had army hats and patches, some of us were generals and other sergeants. Everybody was completely engulfed in the 1800’s! We learned about the Civil War, but we also
learned about ourselves.”

“My most effective teacher was my 8th grade Math teacher: he knew so much about Math, it was remarkable. He could do problems in his head so quickly, and our school won lots of awards in Math competitions every year. He is a Supervisor of Math now, and I’m sorry such a knowledgeable teacher isn’t still teaching other gifted students to love Math as he did for me.”

**SENSE OF HUMOR**

“I liked my teacher who taught a special class for gifted classes in Latin. No one was really interested at first, but he made it fun. He had a great sense of humor, and was able to create that magic mix of fun and seriousness in a class. He didn’t teach from a book—he related the subject to us and to our lives. We spent time learning why we were studying Latin, and its validity to the contemporary world. He even showed us how ancient history was still applicable to the present day. He created puns every day in Latin.”

“The characteristic that I remember from my AP Physics teacher was his sense of humor. He was so effective with the subject, and he always started the class with a joke from the joke box. If we were having a difficult time, he would say, let’s have a joke from the box, and that would break the tension. When I think of him, I smile—he was so conscious that you couldn’t learn if you were uptight. When I’m feeling stressed, I try to find some humor in the situation, and it works.”

**ENTHUSIASM**

“My most effective teacher of the gifted taught Social Studies in 8th grade, and he would dress up like all of the presidents that we were researching. When we studied Andrew Jackson, he came in and was chewing tobacco and even brought a spittoon into class; and ‘yuk’ he spat into it, and we all roared. When he became Teddy Roosevelt and tromped around the room in boots, waving an old shot gun, what an image that was...I’ll never forget his enthusiasm and how he made Social Studies come alive.”

“My favorite teacher was my 8th grade Social Studies teacher who was so enthusiastic that we called her the Energy bunny, she used lots of small group activities, where we had face-to-face interaction and learned about group process. We did simulations in which we experienced interdependence. I remember one activity where we had to figure out a solution, and you couldn’t solve the problem unless everyone contributed. One girl just held on to her clue, and her information—it was maddening—but we learned that everyone has a say, and has to contribute. She (teacher) would move around and observe us in action, then we would reflect on what we had said, and why. We did demonstrations for the other teachers in our middle school, so that they could learn how to use cooperative learning—and you really do need to cooperate in a group, if it is going to work.”

**PASSionate ABOUT LEARNING**

“My Science teacher in the 9th grade was my favorite, and most effective teacher of the gifted. She loved Biology, and we went on several field trips with her. She was so passionate about the environment, and how we were supposed to be stewards. Our school district is involved in the Jason Project, and it was all because of her involvement with the environmentalists. In the summer, she goes to Florida and works in a Marine Habitat for free, and they let her bring back all kinds of specimens for her classes. When she talks about those experiences, she makes all of us want to go with her.”

“Passionate about learning is the descriptor for my effective teacher. She taught in the summer program (THLP) and when she discussed the Supreme Court, you could see how much it meant to her. I thought about listing knowledgeable, because she knew all of the court cases by name, number, and their findings, but it was her excitement, her passion that made it come alive for us.”

**SENSITIVE**

“My most effective teacher was an English teacher in high school who would turn the lights off, and we would have Dead Poets Society meetings. We would do oral interpretations of the poets that we studied, sometimes with costumes and props. I remember once
when we were reading Edgar Allan Poe, and a student read Annabel Lee, and when the lights came on, my teacher was brushing away tears—he helped me understand that it is alright to be sensitive and to show your feelings.”

“The most effective teacher that I remember was my 5th grade teacher who had a bulletin board that said, A THING OF BEAUTY IS A JOY FOREVER. Each of us could bring something that we thought was beautiful and put it on the board. When she noticed, something new was on the board, she would ask that person to share. She would listen and always say something about the contribution. She was one of the most sensitive teachers that I ever experienced. I brought a picture of a newborn calf, and the other students laughed. She said the calf was truly one of the most beautiful things she had ever seen, and I knew that she understood my feelings.”

FAIR
“The most effective teacher of the gifted that I remember was fair, she taught our fifth grade gifted resource room, and she really believed in being non-judgmental. She said that when you look at life and other people through the eyes of non-judgment, you have a sort of X-ray that allows you to see past the bad—and straight to the good. She would give us homework to be non-judgmental from one class day to another, and then we would sit in a circle and tell one another what we had observed. I think we should have Non-Judgmental Day, no make it Non-Judgmental Year, or even Non-Judgmental Life.”

“The most effective teacher of the gifted that I remember was my 7th grade teacher in an inner city school where we had more than our share of problems, students fighting, breaking rules, skipping school, stealing, swearing—you name it. But our teacher had a way of handling those situations, we had to discuss the incident, gather the facts, listen to both sides, and then a fair decision would be made. I am at the University of Texas now, and believe me I still remember those lessons in the importance of listening to all sides, and making a fair decision. It was a life lesson.”

HIGH ENERGY
“My most effective teacher of the gifted was a Language Arts middle school teacher who was sympathetic, patient, and had a great imagination, but her real talent was her ability to motivate us, she was so energetic. She could awaken a drive for answers and insights in the most lack-a-daisical student—even me, energize and motivate all of us. She enlarged my personal life and gave it meaning.”

“The teacher I remember as most effective was my 9th grade Gifted English classroom teacher; she was also the advisor for the Journalism class. She would fly around the room, so full of energy, whether she was listening to most discussions about our writing, as we shared a rough draft, or directing us to the Thesaurus, or to the internet. Misspelling was totally unacceptable, and even today in college when I see a word misspelled, it jumps out at me. I can’t overlook it due to the training that I received from her.”

RESPECT AND UNDERSTANDING OF GIFTEDNESS
“I don’t know if anyone else will say this, but what I liked about my 8th grade teacher in Pre-AP English was that she showed me and the other gifted students respect. She took the time and made the effort to give me special attention and praise me as often as she could. Her attention and respect for my effort helped me get over my shyness and insecurity. She knew that being gifted didn’t mean you were always right or always understood right away.”

“My Math teacher really understood giftedness, his daughter was gifted, and he knew that just because you were gifted didn’t mean that you were gifted in everything or gifted all the time. He let each of us progress at our own speed, and I don’t remember him ever comparing one student to another. We were compared against ourself. He used games and competitions, because he understood how much we liked that sort of high energy game-like learning. He was one of my best teachers.”

ETHICAL
“My most effective teacher and class was a special
summer university program where we studied the Holocaust. The teacher would invite each of us to do our presentations, and guide the discussions, speaking less herself, than us. In that class, there were tears, quiet laughter, dignity and respect that helped me to understand a deeper meaning of what it means to be human. I’m not sure what the characteristic is, high-principled or better yet, ethical comes to mind. She walks the high road.”

“My most effective teacher was my 8th grade Gifted Social Studies teacher who had us identify issues in the paper by circling the news with a marker, then we would research the issue that we identified. She would say, “Challenge the current concept, is it ethical?” I still remember those discussions as each person or group posed their contradictions. I find that when I’m reading the paper today, I still think of what she said, “Is this ethical?”

Summary and Conclusions
The descriptive paragraphs of these gifted students' effective teachers are a blend of personal-social and intellectual characteristics. The findings of our study reinforce the need for teacher training in gifted education in Texas; particularly, the need for building an understanding of the psychology of gifted students, their needs and characteristics; the need for a strong discipline focus to provide teachers with a rich knowledge base; and the need for a variety of engaging teaching strategies. One important outcome of the study was the identification of “enthusiasm” and “passion for the discipline” as characteristics of effective teachers. These two characteristics need to be given thoughtful consideration by school administrators when teachers of the gifted are being hired or assigned to teach gifted students.

Elliot Eisner (2002) in The Arts and Creative Mind says that educators are so wrapped up in tests scores that they often marginalize the importance of developing socially responsible citizens who are willing to contribute to the larger social welfare, and know how to do it. These gifted students’ descriptions of effective teachers attest to this statement, and remind us that the major lessons of schooling often manifest themselves outside the context of school. As educators, we want to address the potential that our gifted students possess for shaping not only the world, but themselves as well. Preparing gifted students for tomorrow is best served by effective teachers who demonstrate these intellectual and personal-social characteristics in their interactions with gifted students, and provide them with meaningful education today.

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Dr. Dorothy Sisk specializes in the field of gifted education focusing on creative behavior and leadership development. She holds an endowed chair and is currently a professor in education at Lamar University, where she directs the C.W. and Dorothy Ann Conn Chair for Gifted Education and the Center for Creativity, Innovation and Leadership. She also coordinates
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Dr. Sisk is world renowned for her leadership in gifted education over the last twenty years. She is co-author with Doris Shallcross of Intuition: An Inner Way of Knowing; Leadership: Making Things Happen; and The Growing Person: How to Develop Healthy Emotional Development in Children; co-author with E. Paul Torrance, Teaching Gifted Children in the Regular Classroom; co-author of Leadership: A Special Type of Giftedness with Hilda Rosselli; and co-author of A Primer for Futures Studies with Charles Whately. She was author of Creative Teaching of the Gifted. She has also authored and co-authored numerous chapters, articles and papers.

Dr. Sisk served as the Director of the U.S. Office of the Gifted and Talented, playing an instrumental role in increasing the cadre of professionally trained consultants for the gifted, thereby expanding opportunities for students.

Dr. Sisk held the positions of the President, Vice President and Executive Administrator of the World Council for Gifted and Talented Children and President of the Association for Gifted (TAG). She was the first President of the American Creativity Association (ACA) and currently serves on the Board of Directors. She also served as Editor of the Gifted International Journal and is an associate editor of the Journal for Creative Behavior and Gifted International.

Creative expression through visual, performing or literary arts brings the unconscious to a symbolic level. Gifted children as keen observers can be shown how symbols they use in their creative work gives evidence to types of deeper meaning. The arts are able to nurture the soul for children (Miller, J. P., 2000) and provide a mechanism for healing the wounds that are deeply hidden. A deep level of consciousness is required from the teacher to do this work with not only the proper training, but with sensitivity, ambiguity, inquiry and not judgment or certainty.

Teaching with spirit is another concept that is helpful when thinking about developing a conscious classroom. Having the courage to teach with spirit is a concept that is difficult to describe. In fact, the language often confuses people who fear that spirit relates too closely to religion or to a part of self that is too personal and intimate. However, each time we interact with another human being we communicate at this level. Teachers communicate spiritual values in the way they want children to interact with kindness or competition.

Concepts of spirit can be found in gifted education through the creativity literature, as in creative spirit. The spirit is evident in curriculum planning in the Integrative Education Model (Clark, 2002). The model was designed for gifted learners and includes intuition as one of four functions that must be integrated for optimal learning to occur. Clark explains, “Learning is optimal when thinking (both linear and spatial), feeling, physical/sensing, and intuition are all a part of the learning experience.” (p. 373). Intuition represents creativity or spirit.

The four functions used in the Integrative Education Model (Clark, 2002) evolved from a psychological theory proposed by Carl Jung (Stein, 1998). Jung was a Swiss psychiatrist whose work has been very influential in understanding the ways that gifted youth and children and their teachers might differ from other learners (Hawkins, 1998; Mills, 2003; Piirto, 1999). The psychological type theory is the foundation for going deeper into understanding oneself. Teachers of the gifted have been found to differ from general educators in ways that match the preferences of gifted learners (Piirto, 1999).

The psychological theory is based on the idea that we have two ways of taking in information (perception) and two ways of making decisions (judgment). We perceive along a continuum of the functions of sensing (concrete,
physical) to the function of intuition (abstract, imaginational). We judge along a continuum of the function of thinking (logical, criterion-based) to the function of feeling (sentimental, value-based). Although we each have preferences for where along the continuum we feel comfortable, a whole person approach is to flex our strengths and stretch our less preferred functions. Thus, the whole child is taught by using all four functions in an integrated fashion. What is important about this discussion is the inclusion of intuition. Often, we have heard of cognitive, affective and psychomotor domains of child functioning or development. Less often, is creativity, intuition, and the depth of spirit included in educational planning. Likewise, with teacher preparation standards, we see standards listed as knowledge and skills, cognitive, affective, with little mention of creativity, intuition, courage, and consciousness. Qualities of the holistic teacher might resemble the characteristics of gifted adults.

Holistic education is an evolving and enlarging body of literature and research that assists in establishing the priority of courageous teaching. For Ron Miller (2000) holistic education … is based on the premise that each person finds identity, meaning, and purpose in life through connections to the community, to the natural world, and to spiritual values such as compassion and peace.

(p. 206)

Deeper yet is the Jungian concept of integration, or the emotional maturation that requires a teacher who carries her or his own self esteem (Clark, 2002). A teacher who knows how important it is to live in the present and to nourish the soul (Miller, J. P., 2000).

Consciousness and unconsciousness seem to be strange concepts to bring up in a discussion about teachers of the gifted. Yet, when all the other standards, outcomes, competencies or requirements are met, there remains substantial differences between the teachers who find lasting success in teaching talented learners and those who feel it is not suited for them. Reflecting on the literature we now have on the social and emotional needs of gifted, we notice words like inner depth, meaning (Heng, 2003), sensitivity (Silverman, 1994), spirituality (Piechowski, 2003), and intuition (Clark, 2002). Now, we must find the teachers who know how to respond deeply to those characteristics and needs.

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(from FORESTER, page 10)

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Mrs. Forester is a G/T-Specialist in Tomball ISD. She graduated from Upsala College in 1980 and received her M.Ed. from the University of Houston in 2000 where she is currently enrolled in the doctoral program. A teacher of gifted students for two decades, Mrs. Forester has presented at conferences, including the TAGT Professional Development Conference and the World Council for Gifted Children’s Biennial Conference in Adelaide, Australia.
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REFERENCES


This article introduces a leadership program for Texas middle school students to supplement this historically overlooked area of gifted education. All cited research is quoted directly from Betsy Owens Carpenter’s 1996 dissertation, A Study of Leadership Characteristics and Skills of Gifted and Talented Secondary Students. Dr. Carpenter is an Educational Consultant for leadership and gifted curriculum and resides in Bastrop, Texas.

Monica Florida is the Educational Outreach Director and Cofounder of Education in Action. With a B.S. in Advertising from UT Austin, Florida has built on her love of travel and geography to earn a teaching certificate in geography and was recognized for her outstanding teaching in Bastrop ISD.
What characteristics do effective teachers of gifted and talented students have in common? Do they have similar personalities? Curriculum? Instructional practices? Classroom environments? Are these teachers born to teach gifted students or have they developed skills that make them effective? How are characteristics of effective teachers who teach gifted students different from those who teach general education students? These are some of the questions that stimulated this review of the literature on teacher characteristics.

Journal articles published since 1994 in Gifted Child Quarterly, Journal for the Education of the Gifted, The Journal of Secondary Gifted Education, and Roeper Review were examined. To be reviewed, the article needed to include teachers in the sample and focus more on characteristics of teachers than on characteristics of program models. All articles addressing characteristics of teachers, their classroom practices, the practices’ effects on K-12 students, and/or the roles of teachers of gifted students were examined. Articles that were primarily opinion or were characteristics of teachers from other countries were omitted. These selection criteria identified 26 articles. The vast majority (92%, N=24) of the samples included elementary teachers with only 35% (N=9) including secondary teachers. In addition, 65% (N=17) were characteristics of teachers who taught gifted students in general education classrooms. Only 35% (N=9) addressed characteristics of teachers whose major role was providing direct service to gifted students in pull out, enrichment, or magnet school programs. Only 27% (N=7) of the articles used quasi-experimental designs, which assessed the effects of specific teacher characteristics or programs on gifted students. Most were either descriptive 31% (N=8) or qualitative 42% (N=11), with 6 studying the characteristics of one teacher. For the most part, data were collected using multiple methods such as interviews, focus groups, observations, standardized tests, group meetings, consultation reports, and document reviews. Only two used just survey instruments.

Researchers described characteristics of gifted teachers through the lens of “optimal experience,” multicultural environments, teaching preferences, teacher roles, and specific instructional strategies. Coleman (1994) described one teacher as having an optimal experience “being a teacher,” which was influenced by a variety of emotions. While teaching, the teacher’s sense of time was altered, particularly when the instructional dynamics were congruent—the task had clear goals, could be completed, provided immediate feedback, and a sense of control over one’s actions.

Three studies (Kitano & Pedersen, 2002; Kitano & Pedersen, 2002b; Uresti, Goertz, & Bernal, 2002) described teachers who addressed diversity in their classrooms. These teachers assessed children’s interests and background knowledge and related new concepts
to the background. They used multicultural issues such as contributions of people from diverse groups and stereotypes and specific strategies that promoted higher level and creative thinking such as independent studies and schema journals.

Using the Myers Briggs, Mills (2003) examined the preference of teachers who taught in the Center for Talented Youth. She found that all of the teachers and the students had a preference for intuition, which typically means that they "prefer to see the big picture, engage in abstract reasoning, and generate ideas; they tend to be innovative and intuitive and see patterns and themes" (p. 278).

Two researchers described the characteristics of teachers who assume different roles (Landrum, 2001; Purcell & Leppien, 1998). Purcell and Leppien (1998) described the importance of collaboration when gifted teachers working with general education teachers—resourcefulness and the ability to communicate. Landrum (2001) identified two roles for a catalyst teacher—a teacher of gifted students and a consultant. First, a teacher of gifted students must serve students in a pullout program, team-teach, develop pullout materials for instruction and disseminate materials to the general education teachers. Second, a consultant to general education teachers must "coplan, coteach, provide differentiated education, link gifted and general education curricula, share responsibility for student assessment, and gather and distribute educational resources" (Landrum, p. 148).

Most of the researchers described specific practices teachers of gifted students use. Researchers described how teachers differentiated content, process, and product by establishing high standards, assessing for program placement, defining key concepts and generalizations, developing concept-based units or lessons, accelerating content, using higher level and creative thinking, authentic methodologies, and developing presentations and performances (Hughes, 1999; Joffe, 2001; Miranda & Landmann, 2001; Rash & Miller, 2000; Tomlinson, 1995; Westberg & Archambault, Jr., 1997). Specific strategies included discussion, independent studies, mentorships, and creativity strategies (Hébert & Neumeister, 2000); and specific programs, Creative Problem Solving, Junior Great Books, and Talents Unlimited (Rash & Miller, 2000). Managing differentiation was also described as very important and involved the creation of open-ended activities, learning centers, student choice, curriculum compacting, and flexible groups (e.g., enrichment clusters, cluster groups, cooperative groups, and interest groups) where the environment is learner-centered and the teacher acts as a facilitator (Davalos & Griffin, 1999; de Souza Fleith, 2000; Gentry & Owen, 1999; Johnsen, Haensly, Ryser, & Ford, 2002; Joffe, 2001; Reis, Gentry, & Maxfield, 1998; Reis & Westberg, 1998; Tomlinson, 1995). Other important teacher characteristics included the ability to counsel students, work with parents, and collaborate with teachers and present workshops (Kitano & Landry, 2001; Landrum, 2001; Purcell & Leppien, 1998). Researchers reported that foundational to these practices was an understanding of the characteristics of gifted learners, models of differentiation, and an ability to reflect on one’s (Davalos & Griffin, 1999; Kitano & Landry, 2001; Tomlinson, 1995).

A few of the studies tried to link teacher practices to effects on students' performance. For example, Friedman and Lee (1996) reported that teachers' higher level questions encouraged a greater number of higher-level student responses. Hertzog (1997, 1998) found that open-ended tasks did not necessarily challenge students academically unless the content domain was changed. Gentry and Owen (1999) reported that

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I remember everything he taught being interrelated and theme-based.... Probably the single most important thing I took away from his class that has stayed with me all through school was the love of knowledge.

_A student's perception of a gifted teacher's classroom as reported in Miranda and Landmann, 2001_
students’ reading and mathematics performance was greater than the comparison group when teachers regrouped by achievement. Unfortunately, Gentry, Rizza, and Owen (2002) found that there was not a relationship between the teacher reports of providing challenge and choice and their students’ perceptions of what occurred in the classroom. While this result is disappointing, most of these studies relied on observations and multiple methods of data collection. Hansen and Feldhusen (1994) do report that GT trained teachers tend to demonstrate greater teaching skills and develop more positive class climates than those who had no training in gifted education. Similarly, Rash and Miller (2000) reported that the more years in teaching and the higher the degree, the more likely the teachers implemented a greater variety of curricular models to serve students.

In conclusion, researchers tend to agree on many of the teacher characteristics that relate to classroom effectiveness. In addition, preliminary studies suggest that teachers with advanced training demonstrate more of these characteristics. However, few studies actually examine the relationship between these characteristics and student performance. As a field, we need to clearly identify these relationships and advocate for state-mandated certificates for gifted teachers.

Coleman, L. J. (1994). “Being a teacher”: Emotions and optimal experience while teaching gifted children. Gifted Child Quarterly, 38(3), 146-152. The researcher studied a single teacher, Alex, using phenomenological interviews and participant observation to understand the emotions he experienced while teaching in a special program for gifted and talented students. The results indicated that Alex experienced a variety of emotions generated when the instructional dynamics of the lesson were congruent or incongruent with his professional practice knowledge. A compelling emotional state, “being a teacher,” was found to incorporate many of his feelings and was found repeatedly in his classes. Alex seemed to be trying to recreate being a teacher as he taught. His emotional state was interpreted to be isomorphic to what Csikzentmihalyi (1990) calls “optimal experience.” The findings of the study suggest that the special class setting established conditions that increased the probability that Alex would be having an optimal experience. Coleman summarized the teacher’s instruction as having attributes of optimal experience: tasks can be completed, concentration is possible, task has clear goals, task provides immediate feedback, a sense of control over one’s actions, and sense of time is altered.

Davalos, R., & Griffin, G. (1999). The impact of teachers’ individualized practices on gifted students in rural, heterogeneous classrooms. Roeper Review, 21(4), 308-314. In this study, the researchers spent more than 150 hours observing teachers while they were being trained to individualize instruction in the areas of content, rate, preference, and environment. They then made weekly visits to the classrooms in which these teachers taught for over a period of a year and a half, observing for approximately 200 hours to determine the extent to which the teachers met their goals for individualization and the effects on the students. The results of their study indicated that gifted students might be served in a classroom of students with varying abilities without special grouping in a resource setting if (1) the classroom teacher understands personally the benefits of an individualized education and is highly motivated to use individualization as an instructional technique, (2) the classroom teacher is willing to give control over learning to the students themselves, (3) the teacher understands academic, social, and emotional needs of gifted learners and is prepared to support those needs, (4) the classroom teacher receives proper training in individualization techniques in order to acquire skills necessary for implementation, and (5) the regular classroom teacher facilitates the development of a shared language of learning among students and instructors.

de Souza Fleith, D. (2000). Teachers and student perceptions of creativity in the classroom environment. Roeper Review, 22(3), 148-153. This study investigated teachers and students’ perceptions about classroom characteristics that enhance or inhibit the development of creativity. Of the sample of 7 teachers, 3 taught third grade, 3 taught fourth grade classrooms, and 1 taught a mixed third and fourth grade
classroom. Of the sample of students, 15 were in the third grade and 16 were in the fourth grade. Data were gathered from semi-structured interviews and focus groups. Teachers viewed classroom environments that enhance creativity as providing choice, building confidence, accepting students as they are, and helping them become aware of their creativity. Instructional strategies used were brainstorming, flexible directions, arts, center, free time, cluster and cooperative groups. Activities that enhanced creativity had these characteristics: open-ended, hands-on, creative writing, and drawing. The students also described the classroom as one where they enjoyed their work and had fun, their relationships with other people positively, and the importance of choices of activities.

Friedman, R. C., & Lee, S. W. (1996). Differentiating instruction for high-achieving/gifted children in regular classrooms: A field test of three gifted-education models. *Journal for the Education of the Gifted, 19*, 405-436. This study examined three instructional models: the Enrichment Triad Model (Renzulli & Reis, 1986), the Multiple Talent Model (Taylor, 1986), and the Cognitive-Affective Interaction Model (Williams, 1986). These models were field-tested in inclusive, general-education classrooms in rural, low-income, and/or ethnically diverse communities. The researchers analyzed how certain elements of the model affected the cognitive complexity of the classroom environment and student involvement in schoolwork. Using a multiple-baseline-across-settings design, the researchers interviewed the participants and observed in teachers' classrooms. They found that a strong positive relationship existed between teacher questions and student responses—the higher cognitive level of the teacher question elicited higher cognitive levels of student responses. The students in classrooms using the Cognitive-Affective Interaction Model demonstrated the greatest gains in higher cognitive levels.

Gentry, M., Rizza, M. G., & Owen, S. V. (2002). Examining perceptions of challenge and choice in classrooms: The relationship between teachers and their students and comparisons between gifted students and other students. *Gifted Child Quarterly, 46*(2), 145-155. This National Research Center on Gifted and Talented sample was drawn from 155 classroom teachers in grades 3-8 from 23 schools in 7 states. Of the elementary students who participated, 167 were gifted students in regular classrooms, 1580
other students in regular classrooms, and 334 gifted student in magnet schools. Of the middle school students who participated, 116 were gifted student in regular classrooms, 888 other students in regular classrooms, and 559 were in magnet schools. Student perceptions regarding the choices in their classrooms were collected using the My Class Activities Instrument. Teacher perceptions of how often they provided challenges and choices in their classrooms were measured by the Classroom Practices Teacher Survey. No relationship existed between what teachers reported they do and what students perceived is done at the elementary and middle school levels. Magnet school gifted students did report more challenging activities than their gifted and other peers at the middle school level did. No differences existed at the elementary level.

Hansen, J. B., & Feldhusen, J. F. (1994). Comparison of trained and untrained teachers of gifted students. Gifted Child Quarterly, 38(3), 115-121. A total of 82 teachers (54 trained in gifted education and 28 untrained) participated in this study. Teaching skills were assessed by trained observers using the Teacher Observation Form (TOF), an instrument that consisted of 12 items that focus on critical skills for teaching gifted students. Class climate was measured with the Class Activities Questionnaire (CAQ). Eight observer/raters were used in the study to observe a total of 265 students who were selected randomly. Of these students, 270 were from the classes of the 54 teachers who had received training in gifted education and 95 were from the classes of the teachers who were untrained. Student t-tests were used to compare composite scores for trained and untrained teachers for the TOF and the CAQ. The researchers report that teachers who had been trained in gifted education demonstrated greater teaching skills and developed more positive class climates than did teachers had no training in gifted education. Students of GT trained teachers reported greater emphasis on higher level thinking skills and on discussion, and less emphasis on lecture and grades than did students of untrained teachers.

Hébert, T. P., & Neumeister, K. L. S. (2000). University mentors in the elementary classroom: Supporting the intellectual, motivational, and emotional needs of high-ability students. Journal for the Education of the Gifted, 24(2), 122-148. Case study and ethnographic research methods were used to examine how a fourth-grade teacher implemented a mentoring program and its effect on the students. Data collection included observations, interviews, and document review. Through thoughtful program design, the teacher was able to create 18 successful partnerships between her students and the university mentors. The thoughtful program design included preplanning, instructional strategies and flexibility. In preplanning, the teacher selected a topic, developed thorough guidelines, developed a research journal for each student that included a record of resources, procedures for note taking, steps to writing rough drafts and finished drafts, and other helpful organizational strategies. She was flexible in allowing the university students to determine their own weekly meeting times with their students and coached the mentors from the sidelines. (Mentors met with their students twice a week for two to four hours.) The teacher also implemented curriculum compacting so that the high ability students would have time to work with their mentors. At the conclusion of the program, the teacher organized a banquet for the mentors and the students theatrical presentations. The program met the goal of meeting differentiated needs of the students and created opportunities for new relationships between the university mentors and the teachers’ students.

Hertzog, N. B. (1997). Open-ended activities and their role in maintaining challenge. Journal for the Education of the Gifted, 21, 54-81. Using qualitative methodology, Hertzog focused on observing one third and one fourth grade teachers’ classrooms—their teacher behaviors, open-ended activities, the classroom environment, and responses from 11 identified gifted students. Along with observations, data were collected using open-ended activities, structured and semistructured interviews and copies of students’ responses to open-ended activities. The author discovered that the open-ended activities, those with multiple responses, allowed children to work in their preferred learning style but did not necessarily
challenge them academically or motivate them to complete their independently chosen work.

Hertzog, N. B. (1998). Open-ended activities: Differentiation through learner responses. *Gifted Child Quarterly, 42*(4), 212-227. In this ethnographic study, the researcher focused on how and in what ways the responses to open-ended activities of children identified as gifted differed from responses of children who were not identified as gifted in one third-grade and one fourth-grade heterogeneously grouped classrooms. “Open-ended” activities refer specifically to those with multiple responses rather than one correct answer. Data sources included observations over the course of one academic year, interviews with teachers and students, learning style and interest assessment instruments, and documents related to over 33 open-ended activities. The author found that the two teachers in the study evaluated students’ responses relative to their expectations of the students, in relationship to the students’ abilities. Frequently, students pursued the same knowledge in different ways, but when choices were provided within the content domain, greatest differences in responses occurred. The author found that differentiation of learner responses occurred even when the product involved limited student choices and was not “open.”

Hughes, L. (1999). Action research and practical inquiry: How can I meet the needs of the high-ability student within my regular education classroom? *Journal for the Education of the Gifted, 22*, 282-297. Using data collected from student questionnaires, parent interviews, classroom observations, and teacher-student portfolio conferences, this fourth grade teacher-identified activities for her high-ability students: differentiated instruction, student choice, flexible groupings, and mixed enrichment with acceleration. The teacher reported that using these strategies, students were not doing the same thing, were not “stuck” in the same group all year, were able to make choices that matched their interests and abilities, enjoyed enrichment and acceleration, and reported a positive classroom atmosphere.

Johnsen, S. K., Haensly, P. A., Ryser, G. R., & Ford, R. F. (2002). Changing general education classroom practices to adapt for gifted students. *Gifted Child Quarterly, 46*(1), 45-63. This study described changes in classroom instructional practices of 74 general education elementary teachers in 1 urban and 5 rural sites who participated in staff development activities over a two-year period. The staff development focused on classroom changes that adapted for gifted student differences in content, rate, preference and environment. The teachers were observed once before training and twice after training. In addition, data were collected from field notes, observations, and interviews. The researchers reported changes in all of the staff development areas. In rate, 57% of the teachers used assessments to recycle, compact the curriculum, provide enrichment, or allow students to pursue topics of interest to them versus 6% prior to training. In preference, 71% of the teachers began offering a variety of learning activities as opposed to only 13% of the teachers before training. In content 43% of the cohort were using concept-based units while only 11% did so before. Finally, 86% designed classrooms around learning centers after the training versus 17% before training.

Joffe, W. S. (2001). Investigating the acquisition of pedagogical knowledge: Interviews with a beginning teacher of the gifted. *Roeper Review, 23*(4), 219-225. The researcher wanted to examine how a fifth grade novice teacher’s knowledge of gifted learners’ characteristics and educational requirements and other knowledge gained through observation assists a beginning teacher of the gifted in developing specially adapted pedagogy. Using a case study, Joffe gathered data through semi-structured interviews that focused on previous observations, instructional strategies, curricular decisions, the learning environment, and interactions. In terms of instructional practices, the teacher reported that gifted students were more likely to ask questions and ask for support from each other than go to the teacher. She also reported more intense parent involvement and faster pacing in a classroom for gifted. Successful instructional strategies included different expectations, flexible grouping, choices, and reading for comprehension. She
described the learning environment as learner-centered, allowing for independence, open, accepting, complex, flexible, and with varied groupings. The novice teacher made decisions based on her use of resources, discovering students' instructional levels, a trial and error approach to instructional strategies, balancing the whole class with individual student needs, being an astute observer, being flexible, and her intuition.

Kitano, M. K., & Landry, H. (Ed.) (2001). Instructional cases: Learning from the dilemmas of practicing teachers. Roeper Review, 23(4), 206-218. The authors gathered instructional cases from practicing teachers to learn about teacher dilemmas and their solutions. Data were gathered through small group meetings and written cases. Teachers reflected on how they had changed or how they had changed a student, a situation or solved a problem. In examining the cases, the authors state that effective teachers of gifted and talented students are authentic, balance content delivery and relationships with students, provide learner-centered instruction, understand student needs in terms of both a disciplinary and a gifted perspective, consult with others, recognize developmental issues, and reflect not only on their practice but on their assumptions about themselves and their students (p. 218).

Kitano, M. K., & Pedersen, K. S. (2002a). Action research and practical inquiry: Multicultural content integration in gifted education: Lessons from the field. Journal for the Education of the Gifted, 25(3), 269-289. Using practical inquiry, the researchers initially asked 58 elementary and 79 secondary teachers to respond to a brief survey on multicultural education, describing multicultural goals, obstacles, benefits, and challenges. Most of the respondents (77.5%) were teaching gifted students. Overall, the majority of teachers identified these topics as goals for gifted students: contributions of people from diverse groups; valuing diversity; literature, art, traditions, history of diverse groups; issues of prejudice, racism, discrimination: stereotypes; prejudice reduction; understanding oneself and others; perspectives of diverse groups on a topic or event; issues of sexism. The teachers viewed the greatest obstacles as relevance to district mandated standards and/or exams and the lack of materials. Benefits perceived by the teachers included more accepting behavior in the classroom; increased knowledge and awareness of social issues, greater appreciation for other cultures and their concerns and issues, valuing of diversity, lively discussions, and increased self-esteem. The researchers then observed in the classroom and collected information from professional development activities from discussions, written assignments, and videotapes. They reported examples of teachers who engaged their classes in activities that addressed contributions of individuals from diverse backgrounds; contemporary social issues; history; perspectives; and skills for social change.

Kitano, M. K., & Pedersen, K. S. (2002b). Action research and practical inquiry: Teaching gifted English learners. Journal for the Education of the Gifted, 26(2), 132-147. The authors invited 24 teachers to participate in two two-hour focus groups who met these criteria: certified in gifted education, currently teaching English learners identified as gifted or highly gifted, located at various sites across the district, working with students representing a variety of primary languages, and themselves representing diverse ethnic and cultural backgrounds. Results from these discussions indicated that teachers describe gifted English learners enjoy being introduced to new material, experience higher achievement in mathematics and science, and hesitant to speak out in class where they are a minority. They suggested that gifted English learners show greater independence than typical English learners, prefer a faster pace, and prefer challenge. The teachers suggested these strategies for working with gifted English learners: assess children's interests and background knowledge and relate new concepts to background knowledge, show rather than tell students, conference with children individually, employ reciprocal teaching and literature circles, model reading and thinking strategies, use direct instruction to teach basic skills and help children develop automaticity, use strategies that promote higher level and creative thinking and content depth and complexity, tier instruction, and create and refer to schema journals to support high-level schema.
Landrum, M. (2001). An evaluation of the catalyst program: Consultation and collaboration in gifted education. Gifted Child Quarterly, 45(2), 139-151. This article evaluates the catalyst program, which is a resource consultation and collaboration program in gifted education. The sample included 6 gifted education teachers assigned to single buildings, 2 itinerant gifted education teachers assigned to two or three school buildings, and 23 general education teachers in grades 2-6 with cluster groups of gifted learners in their classrooms. In addition, 39 gifted students in grades 3-6 and 53 nongifted students from the same classrooms participated in the study. Within the large, urban school district, 10 elementary schools participated in the pilot project. Data included student academic performance, teacher observations, monthly consultation activity reports, and field notes. Both groups of students improved their performance on the Ross Test of Higher Cognitive Processes. After consultation, the observers noted an increase in the use of independent study and a variety of other differentiation strategies. Following consultation, the general education teachers provided more wait time and differentiated education through advanced products and independent studies. The gifted education specialist spent time in pull-out lessons, team teaching, developing pull-out materials for instruction, and disseminating materials to the general education teachers. Consultative and collaborative activities included “coplanning, coteaching, providing differentiated educational opportunities, linking gifted and general education curricula, sharing responsibility for student assessment, and gathering and distributing educational resources” (P. 148).

Miranda, E., & Landmann, R. (2001). Gifted teachers creating gifted classrooms: One exceptional teacher, one exceptional classroom, Roeper Review, 23(4), 230-234. This article presents a case study of a third grade classroom that provided an enriched curriculum to all of the students. Data were collected from students, former students, parents, teachers, and the principal. The article describes how a teacher with a drama background implemented an integrated curriculum under an umbrella theme, e.g., Primitive Times or the Middle Ages. For students to work in a living museum of history, they must complete these assignments during a six-week period: 100 words (definitions and spelling); terms of the times (research on 20 specific topics); research papers (a minimum of 10 pages on a topic of interest), paragraph translation (paraphrasing an above grade level paragraph), book reports, interviews (students ask their peers questions on topics and take notes), books and movies, and the museums (focused free play regarding their topics).
Purcell, J. H., & Leppien, J. H. (1998). Building bridges between general practitioners and educators of the gifted: A study of collaboration. *Gifted Child Quarterly, 42*(3), 172-181. This research study examined the incidence of collaboration among 289 enrichment specialists, classroom teachers, and administrators. Collaboration was defined as “dialogue and planning between professionals in which the goals is to provide differentiated services for high achieving students” (p. 172). Each of the participants received a five-part survey that contained questions related to demographics. The return rate for each of the three groups exceeded 50%. For the enrichment specialists, 82% indicated that collaboration was used to personalize curricula for high achieving students; 80% of classroom teachers reported that they used collaboration, and 88% of administrators perceived that the strategy was used by practitioners to meet learning needs. For the most part, teachers initiated the collaboration to discuss individual students with 70% of enrichment teachers reporting that they initiated the process, which was a similar report from general practitioners and administrators. Classroom teachers expected enrichment specialists to possess two important skills: resourcefulness and the ability to communicate.

Rash, P. K., & Miller, A. D. (2000). A survey of practices of teachers of the gifted. *Roeper Review, 22*(3), 192-194. In an effort to assess what practices that teachers of gifted students were using, the researchers mailed a survey to 135 teachers in the state of Idaho with responses received from 62 (46%). Teachers spent their days (in descending order of time) teaching accelerated subjects, preparing lessons, writing instructional units, individual student assessment for program placement, special meetings such as IEP meetings, working in the general education classroom in a co-teaching assignment, counseling gifted children, school duties, working with parents of gifted children, student assessment for program placement, and presenting workshops. The programs used most often by the teachers (in descending order) included Creative Problem Solving, Junior Great Books, and Talents Unlimited. The most often used teaching models (in descending order) included Bloom’s Taxonomy, Renzulli’s Enrichment Triad, Creative Problem Solving, Talents Unlimited. The more years in teaching and the higher the degree, the more likely the teachers implemented a greater variety of curricular models to serve students.

Reis, S. M., Gentry, M., & Maxfield, L. R. (1998). The application of enrichment clusters to teachers’ classroom practices. *Journal for the Education of the Gifted, 21*, 310-334. This study investigated the effects of providing enrichment clusters to the entire population of two urban elementary schools. Enrichment clusters provide a regularly scheduled time for a nongraded group of students to complete a product and work with facilitators who have expertise in a shared interest area. The clusters met together for 10 weeks in one school and 12 weeks in the other school. Each meeting lasted 75 minutes and was facilitated by a teacher, community member or parent. Data were collected through written descriptions of observations, interviews, evaluations, and questionnaires. Challenging content was integrated into 95% of the clusters using these strategies: developing products or services, using specific authentic methodologies, using advanced vocabulary, using authentic “tools,” using advanced resources and reference materials, using advanced thinking and problem-solving, integrating creative thinking and historical perspectives, and developing presentations or performances. Approximately 60% of the teachers who facilitated clusters transferred some of the strategies used in clusters into their regular classroom practices.

Reis, S. M., & Westberg, K. L. (1994). The impact of staff development on teachers’ ability to modify curriculum for gifted and talented students. *Gifted Child Quarterly, 38*(3), 127-135. In this study, three levels of staff development were provided to elementary teachers to train them in the instructional strategy of curriculum compacting. Approximately 300 teachers in 20 school districts across the country were randomly assigned by district to one of the three treatment groups that received different levels of staff development. Instruments used in the study included the Classroom Practices Questionnaire (Reis, 1993) and the Compactor Assessment Form (Reis, 1991). After the training, teachers were able to eliminate...
between 42% and 54% of the content for high-ability learners they selected. Teachers in the group that attended the most intensive staff development completed the highest rated compacting forms.

Tomlinson, C. A. (1995). Deciding to differentiate instruction in middle school: One school’s journey. Gifted Child Quarterly, 39(2), 77-87. This qualitative case study examined how middle school teachers responded to differentiated instruction. Data sources and methods included interviews, classroom observations, participation in teacher team meetings, faculty meetings, staff development sessions, and documents. Differentiation skills that middle school teachers needed were these: developing a rationale for differentiation, preparing students and parents for a differentiated classroom, managing a differentiated classroom, defining key concepts and generalizations to be taught, differentiating what is to be taught, differentiating how students think about what is taught, differentiating how students show what they know, understanding/developing models for planning differentiated lessons, establishing interdisciplinary differentiated lessons/units, expanding instructional strategies for differentiating content, process, and product (e.g., compacting, independent study, contracts, creative problem solving, graphic organizers, etc.) (p. 83).

Uresti, R., Goertz, J., & Bernal, E. M. (2002). Maximizing achievement for potentially gifted and talented and regular minority students in a primary classroom. Roeper Review, 25(1), 27-31. This proactive case study examined the implementation of the Autonomous Learner Model by a first grade ESL teacher. Initially the teacher had the students experience some group building and group problem solving activities. Each student also completed a learning style inventory and kept a daily journal as they learned how to create and use centers. The teacher then set up individual interviews to assist each child in choosing a topic for individual enrichment. After collecting information, each of the students set up centers and presented their findings to an identified audience. Given the composition of the classroom, the students scored surprisingly well on the ITBS—in the average to above average range.

Westberg, K. L., & Archambault, Jr., F. X. (1997). A multi-site case study of successful classroom practices for high ability students. Gifted Child Quarterly, 41(1), 42-51. Ten elementary schools and classrooms were studied in order to describe the various practices used to meet the needs of high ability students. Data were gathered in the form of full case studies with the researcher observing in classrooms and conducting open ended interviews. The authors discovered a number of successful practices being implemented at each of the sites. These practices included establishing high standards, making curriculum modifications, finding mentors, encouraging independent investigations and projects, or creating flexible instructional groups. At many of the sites the teachers had a combination of advanced training and knowledge. Most of the teachers were willing to make changes in their classroom practices if it was a benefit to the students. Teachers were able to employ a variety of strategies for differentiating instruction for gifted students. At some sites there was a strong leadership role from the administration. In general these sites displayed a supportive attitude towards the special needs of the gifted and talented population. The authors conclude that teachers who are effective differentiate for the abilities within their classrooms.

Susan Johnsen 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.

Krystal Goree is the Director of Professional Practice and teaches gifted and talented coursework in the School of Education at Baylor University. She is Senior Editor of Gifted Child Today and a past President of the Texas Association for the Gifted and Talented.
have the opportunity to experience "continuous intellectual ascent," while teachers apply "ascending intellectual demand" (AID) as outlined in the Parallel Curriculum Model (PCM) developed through the National Association for Gifted Children, instead of what one teacher calls "de facto differentiation" in which differentiation is dependent upon student responses to stimuli. Unfortunately the latter practice is often the reality. Teachers apply AID by requiring and defining student outcomes that reflect student needs at the novice, apprentice, practitioner and expert levels in the discipline/s. Through their own "continuous intellectual ascent," teachers combine the ideal with the reality of statewide assessments and discipline standards to create "ascending intellectual demand" for their students.

Of particular note in the Parallel Curriculum Institute are two documents showing the AID for teachers in differentiation: one describing teacher needs at each stage of differentiation and the other describing teacher behaviors that match the fulfillment of those needs. The process is skillfully outlined in two documents which will be published in the sequel to The Parallel Curriculum. Developed by Kelly Hedrick of Virginia Beach, Virginia, the two continuums provide a roadmap for us in the development of differentiation and the picture of the teacher behaviors needed to provide gifted services. The progression is not an overnight cure, but a logical, systematic progression toward the goal. In this institute and book, idealism meets realism, and the two become one.

In a tribute to Benjamin Franklin, historian Bernard Bailyn noted, "America's greatest historical moments have occurred when realism and idealism have been combined, and no one knew this better than Franklin." Perhaps, in the educational union of realism and idealism with resources such as The Parallel Curriculum Model: A Design to Develop High Potential and Challenge High-Ability Learners, its sequel currently in development, and through the efforts of teachers, gifted children and their teachers will be able to experience one of education's greatest moments. Enjoy the journey.
Teachers of the gifted understand that individualization is essential! Of course some students never seem to advance beyond intricate playing with ideas. These students are among the ranks of the “underachieving.” These “underachievers” may not ever find a subject area in which their interest warrants them to work diligently, but many times they simply aren’t exposed to their area of passion until later in life. After all, not many kids have access to quality information about forensic anthropology or poetry until college or even later.

The third stage learning relies on completion of stage two, so learners who do not ever push themselves to master the details of a discipline do not experience it. It is fairly rare for teachers of the gifted to have the pleasure of working with a student at this stage. It is the stage of generalization, or, as I call it, the stage of creativity. Many teachers of the gifted have great difficulty leading students here, as generally the teacher must stop providing the instruction and instead provide access to a mentor or educator with expertise in the field. It is no surprise that winners of the Intel Science Competition, Goldwater Scholars, and winners of national music festivals virtually always have teachers or mentors who are professors or practicing professionals.

For teachers of the gifted, as for parents, some of the toughest times are when we must promote our students to teachers who can lead them to the next level. It’s an unspoken secret that educators as well as parents sometimes have difficulty letting go.

Lifelong learners always seem to be simultaneously romancing a new thought or subject and driving themselves to mastery in some other endeavor. The challenges for educators of the gifted is to identify in each student the area(s) of interest and ability, to provide playful and directive learning opportunities in the right subjects, at the right time, and for the right amount of time, and to wisely know when an accomplished expert, usually outside our school district staff, is needed.

It’s no wonder teachers of the gifted are feeling so tired this time of year. They do incredibly difficult and important work. My hat is off to all of them.
Book Reviews

Quotation Quizzlers: Puzzling Your Way Through Famous Quotations. Phillip A. Steinbacher. Dandy Lion Publications

Quotation Quizzlers provides an engaging starting point for teachers seeking to combine higher order thinking and positive role models for their students. This sixty-four page, reproducible, Dandy Lion workbook includes fifty inspirational quotations formatted into select letter arrangement puzzles called quizzlers. Quizzler solutions require a combination of critical thinking skills including deduction; creative thinking skills including flexibility; and language arts fluency skills, including word analysis, grammatical syntax, and sentence composition. Solutions and quotation sources are included along with brief biographies of those quoted and a listing of quotations by themes.

Developed for students in grades 4 – 6, identified language arts gifted students in my classes as young as second grade enjoyed solving the puzzles and discussing the quotations. In a typically gifted interdisciplinary exchange, a favorite quote by Vincent van Gogh especially sparked their interest. “I dream my painting, then I paint my dream,” lead them to connections with Dr. Martin Luther King, Jr. and the self-actualization of their hopes for themselves and the world.

Accomplishment, courage, friendship, happiness, integrity, and wisdom are among the quotation themes presented in this thought-provoking workbook. As a teacher and administrator, I can envision these quizzlers forming the basis of team building and class unity discussions, warm-up introductions incorporating logical thinking into language arts, or the basis for a study of biography. This is a workbook that I will use and keep.


This book presents a highly engaging unit combining criminal investigation, careers in forensic science, and types of evidence. In the culminating activity, students and faculty participate in a simulation of a school-wide arson investigation. Critical analysis of evidence, inference in questioning suspects, determining reasonability of relevant information, and drawing conclusions are among the critical thinking skills honed by students as they work to crack the case and discover the true criminal.

This workbook is so well thought out that if a teacher had the time and cooperation of the staff to conduct the simulation, it would undoubtedly be an educational experience students would not only benefit from but also remember for a lifetime. There in lies the rub. Standards-driven curriculum seldom allows the freedom and the quantity of time this unit requires. Correlations to TEKS (Texas Essential Knowledge and Skills) could justify the process objectives, but the content does not appear to clearly fall within any prescribed grade level. Other problems in implementation include the time requirements for the use of the school staff for a school-wide project or the selection criteria for a limited number of participants. In my opinion, a GT pull-out program utilizing this unit for enrichment purposes, existing in a strongly supportive school would be necessary for the success of this unit.

Drawing Stars and Building Polyhedra. Christopher M. Freeman. Dandy Lion Publications

Polyhedra are three-dimensional figures with flat polygonal surfaces. You probably know them as solids. Christopher Freeman knows them as the door to mathematical motivation and imagination. As both a teacher and a student of concept mathematics, and a proponent of three-dimensional problem solving, I fully agree.

The workbook size, Drawing Stars and Polyhedra, expands the mathematical drawing of star patterns into three-dimensional constructions while guiding students to inductively develop definitions, test conjectures, and analyze properties of geometric shapes. NCTM standards in the areas of numbers and operations, geometry, reasoning and proof, and connections are clearly addressed in the introduction section to each unit. Lessons are open-ended and allow for more advanced students to work independently on more difficult lessons; a real plus for the regular education classroom teacher with multiple mathematics groups.

Drawing Stars, Lesson Six emphasizes the relationship of multiplication factors in star construction. Through the drawing of 12-pointed stars and 13-pointed stars students establish two generalizations about star structure and learn a hands-on lesson about the nature of prime and composite numbers. While the workbook is developed for students in grades 4 – 7, I have shared lesson six with my advanced mathematics students in lower grade levels with equal enthusiasm and success. Factorization, previously a difficult concept for them, became more understandable and “alive” through the use of star development. I plan to use the polyhedra structures with a third and fourth grade mixed-age group of gifted student in a creativity class.

Drawing Stars and Polyhedra exhibits a level of creative giftedness often lacking in mathematics instruction. The interdisciplinary connections and problem solving opportunities these forms present are limited only by the imagination. This is a thinking book for student and teacher alike.
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- June 26 - July 16
- June 26 - July 16
- June 27 - July 17
- July 18 - August 7
- July 18 - August 7
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