It is a cool, clear February evening. Johan, a fourth grader, reads through his library book about Saturn for the eighth time as he and his mother ride the bus through town. They reach the college campus, and the bus stops near the Physics and Astronomy Building. Johan’s teacher has told their class that there are a number of telescopes on the roof of this building through which they will have the chance to see the wonders of space close-up. Johan jumps out of the bus, barely able to control his excitement. With his eyes fixed on the sky, Johan wonders what he will see tonight. Will he be able to see his favorite planet? What would the moon look like? Could he see other galaxies?

He arrives at the observatory just in time to be greeted by his teacher and a number of other classmates and their families. Throughout the evening, Johan and the other families from his class soak up the information from the astronomer. Some of the information they had already heard from their teacher in class, but somehow it takes on new meaning under the star-filled sky. The highlight of Johan’s night is when he gets a turn to gaze through the enormous 24” telescope, keying in on Saturn. When Johan gets back to school, he is more passionate than ever about the wonders of space.

An Underserved Student

Johan, a minority student of low socioeconomic background, displays many characteristics traditionally related to giftedness such as being highly inquisitive, having a fluent vocabulary, and possessing the ability to catch on to new topics very quickly. Johan’s mother sees how smart he is and desires to expose her son to more experiences outside of the classroom. However, she does not know where she can take him for rich experiences on a very limited budget.

Although Johan displays gifted characteristics, he has not been identified based on the traditional measures of intelligence and achievement used in a majority of schools/school systems. His teacher attempts to differentiate for Johan within the classroom, but feels that he would benefit greatly from additional services. She fears that underachievement may be in Johan’s future if he is not exposed to a challenging and engaging curriculum, but wonders how much more she can help Johan in the regular education classroom.

Many teachers have students like Johan in their classroom. These high-ability students from culturally diverse populations or of low socioeconomic status demonstrate giftedness, but are unable to receive gifted services due to their inability to succeed on standardized or normed tests, or by a general lack of access to gifted and talented services. In many cases, these students are lacking the experiences or background knowledge necessary to achieve on traditional measures. Rather than the typical “drill and kill” strategy, which has been found ineffective in engaging students from low socioeconomic backgrounds, teachers must find ways to provide enriched learning experiences that will lead to increased

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Advocate Like You Educate

It’s on days like this, as I sit writing during a short break from the classroom, that I reflect upon the reasons teachers like myself became involved in the field of education in the first place. Even though we may have come from different backgrounds, situations, and environments, our purpose is clearly the same.

For me, the purpose of education is rooted in provisions. Each of us, though involved with the field of gifted and talented education in varying capacities, shares a common desire to provide what is needed. We are providers, not only for our students, but for their parents and families. We continually support our colleagues, reach out to our administrators, and seek to involve entire communities. We offer answers to those that inquire, and rebuttals in defense of the purpose of our collective educational mission—striving to improve the quality of education for all students.

As education and educators struggle to manage competing demands in an increasingly difficult budget environment, it’s clear that some of the best educational practices ever researched and developed, conceived in the field of gifted and talented education, have been watered down or lost altogether. Now found under the guise of terms like 21st century learning, collaborative projects, authentic assessment, and differentiated curricula, the original intentions and purpose of these strategies are either collecting dust on a shelf buried by standardized testing, or practiced in classrooms by teachers without proper training.

As gifted education professionals, we should advocate like we educate, offering provisions to those in need. As educators who have worked for a long time with strategies and practices for alternate identification, grouping, compacting, etc., we are best positioned to aid in putting them back into practice—not just for our gifted and talented students, but for all students. School leaders searching to implement innovative educational practice for school improvement will find that the field of gifted education has something to offer.

This issue of Teaching for High Potential follows the theme of provisions. Katherine Brown and Diane Bresson offer ways to involve families in enriching activities. Nancy Green, NAGC’s executive director, debuts a new column, View from the National Office, which echoes my message above, “What can we offer?” School Spotlight focuses on a school that creates an infectious culture of inquiry. Ed Robson seeks to “give voice” to his students by introducing deliberation. iMathination looks into the heart of Mathematics. Technology Untangled presents a creative tech tool that will change the way students showcase their work. Willard White generates a list of 20 evaluative questions to ask ourselves. Curriculum Connection suggests ways for students to develop a growth mindset. Arts: Minds in Motion says it’s alright for students to creatively push the envelope when telling stories.

We surely have all arrived in the field of gifted and talented education from diverse circumstances. The time has come to share what we know. I’m excited to present this issue to our readers. Don’t forget that 2011 brings with it a Summer Issue. As always, I welcome your comments, suggestions, opinions, and ideas.
It’s a great day for gifted,” I thought as I sat at a press briefing in Washington, DC, savoring the recommendations from the National Science Board’s report on Preparing the Next Generation of STEM Innovators, which came out last Spring.

Even after seven years as NAGC’s executive director, I still get a thrill when I’m part of a national conversation that acknowledges the need to challenge bright learners. Imagine my excitement in hearing a prominent researcher, in front of a large audience of leading educators, education association leaders, and national press observe, “In America, it should be possible, even essential, to elevate the achievement of low-performing at-risk groups while simultaneously lifting the ceiling of achievement for our future innovators. Consistent, coherent, and coordinated opportunities that challenge and inspire high-potential students both in and out of the classroom are needed.”

The expert panel spent the next hour sharing other highlights of this comprehensive report, which included another excellent noteworthy recommendation—to “create learning environments that nurture and celebrate intellectual achievement.”

Hmm…celebrate intellectual achievement? “Could we one day catch up to our nation’s athletes?” I sat and wondered.

For gifted education advocates, reports like this one can help start the conversation. At the national level, one of NAGC’s important roles is to keep this and other conversations going. Even as I was thinking about the diverse ways NAGC could promote the findings, it was gratifying to hear that a prestigious research board packed with national experts in STEM fields, when left to draw their own conclusions, drew the same ones the field of gifted has known all along. “Every student in America deserves the opportunity to achieve his or her full potential.”

To download a copy of the report, and use it in your own advocacy efforts, visit the NAGC website at http://www.nagc.org/index.aspx?id=1484 or the National Science foundation site at http://www.nsf.gov/nsb/stem/innovators.jsp).
Imagine a school whose sole purpose is to address the specific needs and learning styles of gifted children by bringing together highly trained faculty, carefully designed curricula, and like-minded peers. This, combined with a community of enthusiastic learners who share a passion for intellectual inquiry, creativity, and discovery, defines the Sage School. It truly is an extraordinary place! A simple mission guides everything at the Sage School: to allow gifted children to realize their full potential.

In developing the program, leaders at the school have incorporated multiple educational theories rather than subscribing rigidly to any one model. The power of the Sage School derives from grouping students with their intellectual peers in an environment with an appropriately challenging curriculum that benefits them academically, socially, and emotionally. In addition, a 5:1 ratio of students to teachers reflects the school’s goal of creating optimal learning groups. According to parent Raina Alves, who has two children at The Sage School, “The teachers engage the children in such a way that they are thrilled to be learning. The work they do is relevant and exciting, so although the workload is heavy, there is a certain eagerness in doing it!”

The school has developed an educational approach centered on ability-based classroom groupings; dynamic, hands-on classroom environments; and depth of study and appropriate acceleration beyond traditional grade-level materials. The curriculum is designed to establish a solid foundation of classical academic skills, encourage creativity, and challenge advanced learners. An admission process that consists of cognitive testing, teacher recommendations, and student visits helps educational leaders at the school match applicants to an appropriate peer group.

Students are encouraged to stretch their experiences by joining and participating in some of the clubs the school offers, which include Model UN, Middle School musical, Math Club, Young Astronauts Club, Scrabble Club, Computer Programming & Digital Media, and Chamber Ensemble to name just a few. One special program at the Sage School is Cluster Week. While the curriculum already taps into student interests, Cluster Week allows even more student choice and it is a great community event. K-5 students choose two clusters where they engage in many interdisciplinary activities related to that topic. Faculty, administrators, and parents lead the clusters. Some recent topics have included Mock Trial, History at the Movies, Cupcake Decorating, Leaping Lizards, Filmmaking, Animation, Ballet, and many more. It’s not a surprise that teacher Jill Hogan describes that she felt “hit with energy” the first time she came to observe at Sage.

The Sage School difference rests in the recognition that gifted students present a variety of intellectual and emotional needs and therefore, the environment in which they are nurtured should offer a variety of programming options too. Kathy Trogolo, director of admissions and marketing, believes that at the heart of the Sage School is, “a culture of inquiry, deep thinking, and joy in learning that is infectious!”
As a gifted resource teacher, I have always enjoyed the challenge of connecting my students with content they loved and wanted to pursue. Many of the challenges I encountered were overcome with help from my colleagues. Other challenges I stumbled across seemed at times overwhelming. One such challenge I faced in my classroom was working with students who seemed to give up too easily or not even try even when given content that matched their potential and passion. Tyler was a student for whom math had always been a breeze. He was always the first to answer questions in class and loved to show his work on the board. On the day of our state standardized test in math, I received a call from the office that Tyler had refused to take the state test. I found Tyler in the hallway crying. He simply couldn’t do the problems; they were too hard. What had happened? I had always attributed many of these types of challenges to perfectionism and it soon became clear that this situation was the result of something entirely different. It wasn’t until I read the work of Carol Dweck on mindsets that I started to see some hope for meeting these new challenges.

What is mindset?

Dr. Carol Dweck (2006) presented at the 2010 NAGC conference in Atlanta and was well received. Her work on mindset has opened a whole new world to me as an educator. Dweck talks about mindset as a view that you adopt for yourself and asserts that it can profoundly affect the way you lead your life. In her research, she discovered that we adopt one of two views: fixed mindset or growth mindset. People who believe that qualities are carved in stone and can never change no matter what they do have adopted a fixed mindset. Others who believe that qualities can be cultivated through their efforts have adopted a growth mindset.

Mapping the way for growth mindset in our classrooms?

Over and over in Dweck’s work, I hear the voices of my students. Dweck states that the effect of a fixed mindset over time can lead to underperformance, opting out, feelings of loss of control, and even academic dishonesty. What then, can we do to support a growth mindset in our gifted classrooms?

Avoid telling kids they are smart. Instead give praise for persistence and hard work.

Phrases like, “Wow! You guys did that so fast, you are so smart” are good examples of what not to do. The underlying message is: smart kids do things fast so if you aren’t fast, you’re not smart. Instead, try being thoughtful and specific with feedback in class. Using rubrics that are clear about the assignment expectations can send the message to students about what is valued in the classroom. Although grades can be used to assess students, we can use a rubric to provide praise related to hard work. Need some help with this?

Rubistar (www.rubistar.com) is a website that offers some great templates to get you started. A great resource for providing growth-minded feedback is a book by Roberts & Inman (2009) Developing and Assessing Differentiated Student Products.

What might a fixed mindset sound like?

- I am born with a particular intelligence level
- I am worried about what others will think
- I would rather look good no matter what the cost
- I don’t want to take risks
- I can’t change who I am

What might a growth mindset sound like?

- I can always be growing and learning
- I can learn something from failure
- I want to try new things
- Success and/or failure does not define me
- I want to keep asking questions

continued on page 19
When you think of a high-ability social studies student what comes to mind? Someone who can see connections and patterns between facts? Someone who has a passion for history? Someone who can tell you more about an historical topic than you ever cared to know? These students can present unique challenges in the classroom. They can become easily bored as they finish assignments well ahead of everyone else. They can be argumentative and overly confident that their opinion is the truth. They may not value the ideas of classmates and their instructors. How can we address the needs of these students in social studies?

What is Social Studies?

Bolinger and Warren (2007) concluded that “the modern goal of social studies is to develop citizenry and productivity” (p. 71), and discussed how successful people must have interpersonal skills, allowing them to make decisions and solve problems. Clearly, these skills reach far beyond the stereotypical memorization of names, dates, and facts that so often characterizes social studies classrooms. If the goal of social studies is to develop these skills, then students must have opportunities to practice and refine them.

Best teaching practices from Interstate New Teachers Assessment and Support Consortium (INTASC), the National Council for the Social Studies (NCSS), as well as the Indiana Professional Standards Board (IPSB), and the NAGC Gifted Programming Standards include involving students in considering multiple perspectives, critically analyzing appropriate source material, constructing new knowledge, and making sound interpretations. Bolinger and Warren (2007) suggest that debate, Socratic seminars, and individual research can be used as strategies to encourage the development of values and multiple perspectives. Through my involvement in the Integrating International and Civic Education (IICE) project (2007) I have learned how the process of deliberation can be incorporated into the classroom to meet the needs of the high-ability students in my social studies classes, for it targets the core purpose of social studies courses.

According to the IICE group (2007), deliberation involves: considering the merits of different alternatives, weighing the tradeoffs of each alternative with the use of research, collaborating in ways to involve multiple perspectives, sharing perspectives, and making the best possible choice. The process of deliberation helps high-ability students heighten their critical-thinking skills, see the importance of considering multiple perspectives, and develop research skills so that these learners become civicly involved in order to create positive changes. The teacher’s role in deliberation is to generate student interest in a topic, guide students in the research of the topic, and create a safe atmosphere in which to deliberate.

The following example from my own teaching illustrates how to incorporate deliberation into the social studies classroom.

Identify a Topic of Interest

Per Indiana state standards, my seventh graders were to learn about the Eastern Hemisphere. To teach about East Africa, I decided to use an article from National Geographic magazine on zoonotic diseases (Quammen, 2007), pathogens that can jump from animal species to humans. The key question for our class was, “What should the United States do to stop the spread of zoonotic diseases?” We also created the following prompts from opposite viewpoints to help frame the various options for the United States:

1) The United States should not spend time and resources on combating the spread of zoonotic diseases from other countries to the United States.
2) The United States must be vigilant in stopping the spread of zoonotic diseases.

Define the Possible Options and Their Effects

After reading the article, students brainstormed and listed various options that fell between the above prompts. Some of the options included spending more money on research, in-
creasing security on the borders, and raising money to help fight the spread of zoonotic diseases in other parts of the world. Others suggested doing nothing about the movement of people and goods coming into the U.S. After listing the options, students chose the option they wanted to research and present to the rest of the class. They formed groups based on their selections and decided appropriate questions to study to gain an understanding of their option.

Investigate the Background Information

The students then researched the issues surrounding their option. For example, a number of groups wanted to research the trade connections between the countries in the article and the United States. I also asked the students to research basic statistics related to their topic (e.g. per capita Gross Domestic Product, percent of urban population) since the state standards require that students compare various statistics from countries in the Eastern Hemisphere. The English teacher on our academic team used words from the article as part of her spelling and vocabulary tests. Future interdisciplinary approaches could include asking the health or science teacher to share more information on zoonotic diseases, such as Ebola or Hendra. Math teachers could have students create graphs using the statistics they researched about the countries being studied.

Deliberate

Each group then presented their option and research to the rest of the class. Presenters began with their option, told what was positive about the option, explained evidence that supported their findings, gave possible consequences for doing the option, and gave a possible course of action for the class if they supported the option. Students took notes during the presentations and afterward engaged in a “fishbowl activity,” an organized, student-run discussion designed to allow students to ask probing and/or clarifying questions of one another in small groups.

To begin a fishbowl, organize students into groups and have a member of each group sit in an inner circle of chairs. Members of the inner circle have five to eight minutes to ask probing and/or clarifying questions of one another. The teacher monitors key comments while students on the “outside” take notes about what is said. Students utilize these notes when it becomes their turn in the inner circle. Guidelines for the fishbowl activity can be found in the box on page 8.

Reflect

After the fishbowl, each student,
based on his/her own unique perspective and deliberation, reached a position concerning what option he/she believed is best. Students then wrote a summary of what option they thought was best and gave their rationale for their judgment. In addition, I also required them to include evidence from the deliberation in their rationale. For example, one student felt strongly about the option she chose due to the fact she knows of a family who travels to Africa as missionaries and her research made her realize the danger visitors to other parts of the world can face.

Civic Outcome

Finally, students participated in a civic response. The goal of this step is to actively involve the students in an issue. The three methods of civic engagement include educating others, affecting policy, and taking action. For the topic of zoonotic diseases, some of the students wrote a letter to our local Congressman asking that more research dollars be allocated toward finding a cure for Ebola and West Nile. Some students created posters to educate others on ways to prevent the

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### Conducting a Fishbowl Activity

1. **Reference all research that is shared.**
   - Emphasizes the importance of keeping the discussion focused on fact rather than opinion.

2. **Listen to hear and not to respond.**
   - Allows students the opportunity to develop interpersonal skills.

3. **Ask questions to probe and clarify.**
   - Develops higher-order thinking skills.

4. **Recognize the importance of silence.**
   - Encourages students to reflect on what is being discussed instead of just reacting.

5. **Refrain from interrupting.**
   - This is tough for many adolescents to do.

6. **Avoid labeling the viewpoints of others.**
   - Develops interpersonal skills.

7. **Keep an international perspective.**
   - As our world becomes more interdependent, it is crucial that students develop a broader outlook.

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### Join Us In New Orleans!

**NAGC 58th Annual Convention**

![Image of the New Orleans Convention poster](image_url)

**Advancing Potential**

Save the date now, for an earlier start time on Thursday, November 3 through Sunday, November 6, 2011. The location is all under one roof at the Hilton New Orleans Riverside.

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Check [www.nagc.org](http://www.nagc.org) for updates.

**Registration Opens in April**

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### new on the NAGC bookshelf

![Image of the new book cover](image_url)

**U-Stars-Plus Curriculum**

This curriculum, co-published by NAGC and the Council for Exceptional Children (CEC) brings together science and the language arts to deepen student understanding of science concepts. U-Stars-Plus allows teachers to identify high-potential students, especially those from disadvantaged or diverse backgrounds, and provides challenging, high-end learning.

Find the Teacher’s Set and more in the NAGC Bookstore at [www.nagc.org](http://www.nagc.org)
spread of zoonotic diseases. Additional opportunities to get involved include: following local, state, and national current events; writing letters to the editor; voting in local, state, and national elections; attending school board meetings; or promoting community awareness of social needs and issues.

Assessment

While not part of the deliberation process, assessment is a necessary component to any form of learning. I assess student participation in the deliberation stage through participation in the fishbowl and the quality of students’ civic response. Their deliberation scores become part of a unit grade that includes tests and reading assignments, as well as other unit activities.

Get Started with Deliberations

Deliberation is a way to invigorate high-ability students in social studies. The students enjoy the opportunity to discuss “real” issues and have their perspectives valued. I enjoy seeing the interactions among my students and between the students and myself, and also seeing the acquisition and application of the interpersonal skills students need to become successful in the fishbowl, and in life.

If you want to start using deliberations in your classroom and need more guidance, the Choices Program at Brown University has units designed for use in social studies classes. They offer workshops on the topic and can be contacted via www.choices.edu.

References


Family Enrichment Activities

continued from page 1

achievement (Hébert, 2002).

Unfortunately, many schools no longer organize field trips due to tough economic times (Polochanin, 2008). However, family enrichment activities allow for teachers to plan hands-on learning for their students within the community without having to ask the school system or families for money.

Importance of Parent Involvement

Although many factors influence student achievement, parental involvement plays an important role in providing students with experiences that will enhance their learning potential (Ford & Harris, 1999). Children whose families are involved in their learning tend to achieve higher grades and scores on standardized tests, take more academically rigorous courses, have better attendance, earn more credits, enroll in postsecondary programs after successfully graduating from high school, and avoid harmful activities such as alcohol use and violence (Mapp, 2004).

Family enrichment activities are an innovative way to involve families in the school environment and to expose them to rich learning experiences in the community. These activities are voluntary excursions that teachers can offer to families outside of school in order to enhance the learning that is happening within the classroom. In a nutshell, teachers invite students and their parents to meet them at special locations within the local community, including nature centers, art museums, symphonies, or as in Johan’s case, an observatory. These enrichment activities seek to provide families with a connection to the child’s education and enrich his or her learning through community resources during time away from the classroom.

Planning Family Enrichment Activities, aka “Field Trips for Families”

Teachers can offer family enrichment activities at a variety of intervals. Some teachers offer them as frequently as every month, while others offer opportunities just twice a year. When planning, it is important to keep several things in mind about the activities.

1. Fees.
   Admission should either be free or available at minimal cost to ensure the highest participation.
   A quick online search or a phone call to the local Chamber of Commerce can help develop a list of free community resources. Teachers can also delve into travel books written about their city, call their local parks and recreation departments, or contact the community convention and visitor’s bureau for ideas.

2. Location in close proximity to the school is crucial.
   Some families will have difficulty traveling long distances, assuming they can travel at all. In order to make these trips accessible to all families, activities should be located no farther than 30 minutes away and, if possible, located on a public transit route. Easy to read directions should be given to all. Teachers could also encourage families to carpool.

3. Student interest should direct activities.
   Providing families with community resources from various disciplines not only increases student knowledge about numerous topics, but also gives students a sampling of interest in areas they may not previously have been aware of. Many of the activities will be pre-planned by teachers at the beginning of the school year; however, the teacher may choose to leave a few activities open for experiences based solely on student interest.

4. Survey your population.
   An appreciation for cultural awareness can only lead to an accepting classroom environment. Allow students to take pride in their culture and develop a positive mindset that can continue throughout the school year.

5. Take note of state and national standards whenever possible.
   Enrichment activities can promote meaningful learning experiences when related to the curriculum, thereby deepening their knowledge of and interest in a content area.

The Impact

On a sunny morning, Johan, his friend, Ana, and their parents are carpooling to a farm located about fifteen minutes away from their school. The farm contains a plantation home, a graveyard with tombstones dating back to the early nineteenth century, and a cotton gin. The kids have been studying the life of Americans in the 1800’s and chat in the backseat in anticipation of what they will experience today. In the front seat, the parents discuss the amazing places they have visited lately which they never realized existed.

Like many of his classmates, Johan’s interests have grown, his love of learning has been ignited, and his experiences have been deepened, all because of a teacher who showed her students the possibilities for learning right in their own backyard. Family enrichment activities provide students with rich learning experiences, and help to promote a classroom of acceptance and learning. Parents and their children are able to spend time together in a positive atmosphere outside of the traditional classroom. Most importantly, relationships are strengthened on all...
levels: between parents and children, teachers and parents, teachers and students, and students and their peers.

References

Getting Started: 20 Ideas for Family Enrichment Activities
(The local newspaper is a great place to start in finding the resources below.)

- Appreciate diversity by visiting a culture fair.
- Visit an art museum or gallery.
- Experience a different era by visiting an historical home.
- Honor great Americans through historic sites and statues.
- Have a reading day in a local park.
- Discover the past with a visit to an historic cemetery.
- Listen to beautiful music at a community symphony.
- Delight in the drama of a play or puppet show.
- Learn about plants at a state or local botanical garden.
- Explore the wilderness at a state or national park.
- Dive under the sea at a local aquarium or aquatic center.
- Become star-gazers at an observatory.
- Find out where food comes from by visiting a farm or an orchard.
- Learn about local or state government with a tour of government buildings.
- Help others by volunteering as a class to work at a food bank or soup kitchen.
- Encourage life-long learning with a trip to a library.
- Learn about conservation through a class stream clean-up.
- Create a scavenger hunt throughout your town to showcase some student hotspots.
- Attend a lecture at a local university or community event.

www.nagc.org

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For additional campuses and information contact us at:
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SIG Summer Institute for the Gifted
www.giftedstudy.org
Robert Krulwich, an NPR science correspondent, has a blog on the NPR website, Krulwich wonders. His December 16, 2010, post introduced me to the works of Vi Hart who describes herself as a recreational mathematician. I’ve since spent several enjoyable hours exploring her website (http://vihart.com) watching her mathematical doodling videos and then creating my own. I was soon back to the Internet looking for other interesting math videos, both for my own enjoyment and to share.

The first one that is on the top of my “must see” list for all current and future math teachers is Dan Meyer’s talk on TED entitled Math Class Needs a Makeover (http://www.ted.com/talks/dan_meyer_math_curriculum_makeover.html). Dan was a high school math teacher for six years before heading off to Stanford on a doctoral fellowship. His video shares several ideas of ways to engage your students in meaningful problem-solving activities rather than the contrived and often scripted textbook problems. After hearing Dan speak, you’ll want more. I recommend his blog, http://blog.mrmeyer.com, too.

One common theme I found embedded in both Vi and Dan’s websites is a passion for creating mathematics experiences that both engage and develop students. Math is often described as an art form. Paul Lockhart, whose A Mathematician’s Lament was introduced to me in Mr. Krulwich’s blog, suggests math is the purest of the arts. This particular blog entry provides a copy of the lamentation in which Paul describes a fictional nightmare shared by art and music teachers—students exposed to a variety of skills with no context. For example, when the artist in his dream asks the high school Advanced Placement Paint-by-Numbers teacher why colleges care about the course, the teacher replies, “If a student is planning to major in one of the visual sciences, like fashion or interior decorating, then it is really a good idea to get their painting requirement out of the way.” Unfortunately, I have heard similar responses in real life from math teachers, both mine and ones with whom I have worked.

The problem is that very few truly understand what mathematics is all about. When my middle school students told me they were “no good” at math, my response was always, “When have you done any?” The conception of mathematics that these students had was one of computational accuracy, speed, and the ability to recall the right formula at the right time. In the course of the “mathematics education” they lost their curiosity and creativity; something that lies at the heart of the discipline. Paul writes...“there is nothing as dreamy and poetic, nothing as radical, subversive and psychedelic as mathematics.” If this sparks an interest you can read more on The Devlin’s Angle, a column on the Mathematical Association of America’s website, http://www.maa.org/devlin/devlin_03_08.html. Hopefully it will raise questions and spark ideas on how to improve the way you share the love of mathematics with your students.

Changing the way mathematics is taught is like trying to change the direction a glacier is moving—and hopefully math education won’t suffer the same fate as most of the world’s glaciers. I recently ran across the term “curriculum technician” as an alternate title for teachers. When I see mathematics programs that are scripted with 7 minutes allowed for discussion here and 3 minutes for describing a formula there I have to wonder how close we have asked our math educators to become. Change is needed and we can either be the instruments of that change or we can wait and have it imposed upon us. A favorite message on educational reform I share with anyone who will listen is Sir Ken Robinson’s talk on Changing Education Paradigms. You can view the 12-minute version at http://www.youtube.com/watch?v=zDZFcDGpL4U.

There are many gifted future mathematicians who will become lost if the way they experience mathematics in the classroom does not change. We could have even lost Paul Lockhart, whose interests in math at 14 were developed outside of the classroom. I’d like to end using his words:

“Mathematics is the art of explanations. If you deny students the opportunity to engage in this activity—to pose their own problems, to make their own conjectures and discoveries, to be wrong, to be creatively frustrated, to have an inspiration, and to cobble together their own explanations and proofs—you deny them mathematics itself.”
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share the movie.
www.betaclub.org/action
Creative writers benefit from having a forum to share their stories with “authentic audiences.” I have found that young writers are more motivated to prepare their stories and expressive communication techniques with much more intensity and commitment than when they only write and tell for their classmates, parents, and teachers. Motivating young elementary and middle school students to create and tell stories has been one of the most rewarding activities of my career. I hope it will become one for you also.

For more than 20 years I invited (never required) students to become storytellers at the Student Storytelling Festival. As a local storyteller and gifted consultant I have produced and directed these events in a variety of forms throughout the years. A festival usually piggy-backs onto a larger arts, crafts, and music festival that attracts people from all over.

Student Involvement

Most students became involved through school; others became participants in the Storytelling Festivals when their parents read invitations in the newspaper. Student-created stories included some about people who were homeless, little brothers who got into trouble, magical super heroes, and about pets that became famous. Other tellers spun their yarns with the help of stuffed animals or props lined up in front of them; including full costumes for knighthood or huge colorful drawings used as backdrops. One student, Joanna Guy, became involved during the sixth grade. She created a vivid and imaginative original story, garnering the title of “Best Original Story and Telling,” (every student obtains a title as Best for some aspect of storytelling.) She returned to our festival every year as a “Guest Teller” with new original stories. As she moved on to high school, I recommended that she apply to “tell” at the National Youth Storytelling Showcase; www.nationalyouthstorytellingshowcase.org/2011. She was selected to attend for two consecutive years and during her final year won the honor of Grand Torchbearer for storytelling, an award Joanna felt was an asset on her college applications. She attends Cornell University.

Classroom Connections

Storytelling and the associated festivals also have opened up many doors with the educational community, either through the arts discipline or across the curriculum. For example, when I arrived early one day to a second-grade science class, they were experimenting with soap bubbles in cups with straws. After the major part of the experimenting was finished, the teacher began wrapping up the lesson. However, I asked if we could continue by first describing the bubbles and then by creating an “exaggerated” class story. We started by brainstorming “as large as” phrases, sentences, and anecdotes. They began to use measurements from their math class to describe the bubbles: five centimeters wide, 9 centimeters tall. Then they used more exaggerations: 3 meters high, larger than life, as high as the ceiling, bubble-ishly big, supper bubble bagel ish-ish. They were bursting with exaggerated ideas about the beauty of the colors, their size, and movements of the soapy foam. Some students even proposed a “bubble ballet” that people came to watch from all over the U.S. One child suggested that the children somehow ended up in the bubbles, and they took a “bubble balloon ride” all around the country. Never underestimate the power of a brainstorming session where young tellers are allowed to get excited and encouraged to call out.

The Festival Connection

Nine of the children from this vibrant class brought back permission slips to attend one of many Saturday morning festivals. The “story” is the same for each and every school I visited. As each new teacher saw the possibilities to connect their content with storytelling, the invitations to return kept on coming. Students, who might never have been exposed to this art form, were suddenly dreaming up creative and unique stories. Many discovered a love of performance as well, and sought to utilize the skills learned in many of their classes. The key was to provide a more advanced outlet, an authentic venue and audience once the passion in the students was ignited. With our guidance and encouragement, creating stories and performances can help creative and talented bright students maintain interest in school.
Ah, the poster project! Undoubtedly, you first experienced it when you were in elementary school. Nearly every teacher has at one time or another asked students to complete a visual display of their research. Many of us have also experienced how poorly posters travel on school buses, especially on rainy days. For decades, the poster project has represented our best efforts to meet the needs of visual learners. The 22” X 28” blank canvas has seen little advancement other than the development of the trifold board…until now.

Glogster EDU http://edu.glogster.com/ offers a 21st century approach to this classic product choice. Glogster is a web 2.0 platform that allows users to use a catalog of backgrounds and images or upload photos, videos, text, and audio to create a unique online, interactive poster. Through a simple and easy to use drag-and-drop interface, one is able to quickly create a high quality digital project without digging out a pair of scissors or a glue stick.

Glogster EDU offers a secure, private, and safe platform that can be monitored directly by the teacher, who is able to generate all registration information and distribute it to the students, who do not even need an email to register. The registering teacher monitors the content and accessibility of all student “Glogs.” Once the teacher sets up a virtual classroom account, the registered students will only be able to see the Glogs created in that account. Additionally, the students can communicate with the other students within the established class. Students are able to post comments on their classmates’ creations, making peer editing and review a breeze. Teachers are able to communicate directly with each student through Glogster’s built in messaging system.

Three stages of development are featured in the creation of a Glog. While the student is working on the Glog, it is considered to be “Unfinished.” Only the student creating the Glog and the teacher will be able to see the Glog on the student’s profile. Once the student is satisfied with his/her work and wants to show it to the others, the Glog can be classified as “Finished.” The other students can then provide their comments concerning the “Finished” Glog. A third option is “Public for All.” These Glogs will be able to be accessed by all Glogster EDU visitors whether or not they are part of your class or school. This is a great way to create a real-world audience for your students’ products. If a student’s Glog is good enough it could be featured in the Glogpedia, a showcase of the best public Glogs.

I recommend using the Glogster EDU version as opposed to the regular Glogster site. The basic glogster.com site seems to be typically utilized as a tool for expressing teenage angst in ways that are not always appropriate for educational settings. My experience has been that many schools block the http://glogster.com site but allow access to http://edu.glogster.com.

Glogster EDU offers a basic free version that will suffice for most users. However, a Premium version is also available that offers additional graphic libraries as well as an increased ability to manage and assess student products. The Basic plan offers the ability to add 50 students to your classroom account in contrast to the 200 available in the Premium version.

If you are considering ways to use Glogster with your students, download and review the Glogster Educator Resource Library. This PDF provides an excellent overview of the tool and offers ideas for lesson plans, rubrics for assessment, and connections to educational objectives.

Aside from the typical book reports and research project ideas, one way that I have personally utilized Glogster was to have my students create what I refer to as “Auto-bi-GLOG-raphies.” This format allows students to demonstrate their creativity in a way that is much more meaningful than a traditional back-to-school bio.

Glogster EDU equips students with a powerful and easy to use tool designed to promote creative expression in this digital age, and most importantly, since Glogs are stored online, you do not have to worry about how you are going to display all of the posters shown on presentation day!
More forces are affecting instruction in American classrooms today than at any time in modern history. Regulations and mandates for what must be taught, including state curriculum standards as well as local requirements, have added to the pressure classroom teachers are experiencing.

Gifted Students Left Behind

The national movement stemming from the No Child Left Behind Act focuses on the lowest-performing students in our classes; thus both the curriculum and instruction in America’s public schools are aimed primarily at remediation. What about the advanced learners and gifted students? Where are the directions for instructing our highest-performing students? Curriculum based only on the chronological age of the students offers little opportunity for the appropriately challenging instruction gifted students require. Advanced learners are being left behind, and in many schools there is little administrative support for subject- or grade-level acceleration for these students (Colangelo, Assouline, & Gross, 2004).

It is clear that teachers across the country, especially those with general education backgrounds, are asking for assistance in not only identifying but in serving gifted and talented students. “When will I have time to teach, given the diverse nature of my students?” and “How is it possible to accomplish all that is expected now that I am aware of what can be done?” are questions that are commonly asked, and the answers to these questions are certainly not sim-
ple. Oftentimes, accomplishing the mammoth task of linking standards to advanced curriculum seems far out of reach, for even the most seasoned educator. Sometimes all that may be needed is a small step back, a moment for reflection, a chance to assess what is known about the best practices for teaching gifted and talented learners.

**Time for Self-Assessment**

The list of questions on the previous page may be helpful in guiding teachers through the maze of best practices, including ways to enrich and accelerate instruction for the benefit of all students. Teachers should reflect on these practices when planning curriculum for use with gifted students, and revisit them on a regular basis. Self-assessment is an important skill to instill in students and to utilize for ourselves.

More forces are affecting instruction in American classrooms today than at any time in modern history

NAGC has posted guiding questions for each of the new PK-Grade 12 Gifted Programming Standards that serve a similar purpose. These questions can be viewed at http://www.nagc.org/index.aspx?id=6526. Self-assessment tools provide a host of opportunities to stimulate discussion. Whether teachers bring some of the questions up in the lunchroom, during a conversation in the hall, offer to organize professional development around the topic areas, or focus specifically on their own style and methods of teaching, I am confident that the self-assessment exercise will help improve their teaching practice.

Reference
Challenge your Gifted Students while teaching COMMON CORE, NATIONAL and STATE standards!

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Use every opportunity to assess for growth.

Students who have a fixed mindset need to see growth as a friend, not an enemy. Teachers can help students begin to see this by making ongoing assessment a natural part of their daily lessons. Using a “ticket to leave” technique on the way out the door can help teachers see where students are with the topic as well as help students reflect on their own growth. An example of this requires students to complete a 3-2-1 card: 3 things they have learned about the topic today; 2 questions they still have; and finally, 1 big idea they connected with in the lesson. A “ticket to leave” helps conclude a great class and also encourages reflection, allowing students to begin to practice the growth mindset.

Highlight everyone’s valuable contribution.

Classrooms that support a growth mindset take the emphasis away from competition with others and help students find value in working with others. In the classroom, this may involve more problem-based learning or complex tasks that require more than one person to complete.

What can we do to support a growth mindset in our gifted classrooms?

Some teachers find that the “Jigsaw” strategy leads to more collaboration in class. Jigsaw is a strategy developed by psychologist Elliot Aronson in 1971. Divide the class into groups of four to six students. This is their “home” group, each of which is given a task to complete. They then meet in “expert” groups to complete a task with other experts from other groups. After researching or completing their task, they return to their home groups and share what they have learned as the experts. Jigsaw certainly helps students work together more productively.

I value the information on mindsets and it has led me to look at what I do in the classroom in a new way. I still have students like Tyler in my classroom, but I now feel I have acquired yet another piece to the puzzle of what prevents students from connecting with curriculum.

For the next Curriculum Connections I would like to focus on resources that we just can’t live without in the classroom. This could be a kit, a book, or a series of published units, virtual lessons, etc. What indispensable resource do you use or would you like to share with your fellow teachers? I’d love to hear from you! Email me at jgbeasle@uark.edu.

References

www.nagc.org
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