

# GIFTED EDUCATION PRESS QUARTERLY

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Mary Ellen Sweeney and Brooke Walker have written an useful book related to the importance of survey research in gathering information about different cultures and educational programs – *Exploring People & Cultures: Authentic Ethnographic Research in the Classroom, Grades 5-8* (Prufrock Press, 2012). The book is particularly informative for gifted students because it covers many aspects of data gathering including sampling, conducting surveys and interviews, and analyzing results.

In March 2014 the Center for Excellence in Education of McLean, Virginia asked me to write a guest blog statement about gifted education which is presented at: <http://bit.ly/1oqA8fr>. Here are excerpts from the essay: I have always believed that gifted students are our nation's greatest natural-education resource. It is difficult to determine what has caused the serious decline in gifted education, but here are a few ideas I have for improving the current situation:

- Educate all teachers to take a more holistic view of education that stresses the unification of English/language arts, social studies, math and science. Our schools are currently using a curriculum model that is over one-hundred years old and was developed to fulfill education needs at the beginning of the industrial age (late 1800s) in the United States.
- Require all gifted education programs to be integrated with a STEM education curriculum beginning in elementary school. To achieve this goal, the instructional schedules at all school levels will need to be radically reorganized to accommodate a 21<sup>st</sup> century STEM/Humanities program. The model for achieving this reorganization has been operating successfully in public schools for many decades – as exemplified in arts and music programs. As in these esthetically enriching programs, instructional periods should be expanded to the studio level of two or three hours, so that all students will have enough time to work on individual and rigorous STEM/Humanities projects.
- For the gifted and all students, it is important to unify STEM learning with the Humanities. In this regard, I recommend that educators, gifted students and parents read and study the works of great Renaissance artists and scientists such as Leonardo da Vinci, Michelangelo, Galileo and Newton. These and many other gifted Renaissance doers and thinkers had a holistic attitude towards learning that affected the quality of their work.

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- Across the nation, there are many retired individuals in such areas as engineering, science, technology and medical fields who could serve as excellent models for gifted and all students. By recruiting these individuals into inner city and all schools, both students and teachers could learn about real world applications of the sometimes abstruse K-12 curriculum, and be inspired by the accomplishments of these individuals.

#### Articles in the Summer 2014 Issue:

**Joan Smutny, Director of The Center for Gifted in Glenview, Illinois** discusses the Torrance Legacy Awards for students who are gifted in the arts, humanities and invention/creativity areas. I urge all readers to identify students who can compete for these awards. The links at the end of Joan's article contain information for applying.

**Kristina Henry Collins and Tarek C. Grantham of the University of Georgia, Department of Educational Psychology** present a fascinating article on how research in cognitive psychology, creative thinking and mindfulness can lead to a better understanding of STEM education. The article is particularly important because it provides an educational psychology anchor for STEM programs.

**Sanford Aranoff of Rider University in Lawrenceville, New Jersey** has written a provocative article on the deceptions and lies that educational institutions and corporations use to prevent gifted individuals from realizing their potential. In Sanford's usual highly analytic manner, he divides the problem into several institutional and personal examples.

**Harry T. Roman in his essay, *Making Things Happen in Your G&T Classroom***, recommends many practical ways for improving the gifted imagination by involving parents, school board members, and mentors.

**Michael E. Walters** closes this issue with his discussion of five Hollywood directors who helped to win World War II.

**Maurice D. Fisher, Ph.D., Publisher**

**Dr. Bruce Shore**—McGill University, Montreal, Quebec  
**Ms. Joan Smutny**—Northern Illinois University  
**Dr. Colleen Willard-Holt**—Dean, Faculty of Education, Wilfrid Laurier University, Waterloo, Ontario  
**Ms. Susan Winebrenner**—Consultant, San Marcos, California  
**Dr. Ellen Winner**—Boston College  
**Dr. Echo H. Wu**—Murray State University

## The Torrance Legacy Awards: Keeping Creativity Alive Around the World

Joan Smutny, Director

The Center for Gifted Glenview, Illinois

The Torrance Legacy Awards began five years ago as an expression of the genius of E. Paul Torrance, the father of creativity in this country. John Kauffman of Scholastic Testing Service and Joan Franklin Smutny of the Center for Gifted admired his work and collaborated to bring his vision to the children and young people of the world. The first award competition has since expanded to include hundreds of children from all countries of the world, including Singapore, Turkey, India, Australia, and Poland. Writing was the first activity chosen to inspire creative response. Students submitted poems and short stories. Then, in subsequent years, visual arts, musical composition, and, for 2014, inventions were added to the annual Torrance Legacy Awards. Each year the response from children and young people, beginning with grade 2 and going to grade 12, has continued to expand as more teachers encourage their students to submit work towards the goal of publication in the Torrance Award magazine, where winners are published.

Just to give an example of student work in creative writing, consider these examples of winning poetry submissions and excerpts from winning story submissions:

**Mint Tea on a Rainy Morning**  
**(a pantoum)**  
**by Molly Pyne-Jaeger**  
**Los Angeles, CA, Grade 7**

Wafting from the skin-smooth mug  
is the scent of brown leaves.  
Drops pour down the window glass  
like tears that sparrows drink.

Wafting from the skin-smooth mug,  
it winds like a mint spiderweb through the air.  
Like tears that sparrows drink,  
drops hover on the leaves of the willow.

It winds like a mint spiderweb through the air.  
Your eyes would cry if you let them.  
Drops hover on the leaves of the willow,  
like your tears, that hover, unshed.

Your eyes would cry if you let them.  
But you trap tears in the mint spiderweb.  
Like your tears, that hover, unshed,  
rain quivers its way down the windows.

But you trap tears in the mint spiderweb,  
sending them tumbling into the brown leaves.  
Rain quivers its way down the windows,  
as liquid pools on the wet brown porch.

Sending them tumbling into the brown leaves,

you weep your endless tears into the mint spiderweb.  
As liquid pools on the wet brown porch,  
water trickles off the silvery leaves of the willow.  
Is the scent of brown leaves  
something more than it seems?  
Like tears that sparrows drink,  
faint brown rain spills down the skin-smooth mug.

**The Cactus**  
**by Malcolm Tang**  
**Singapore, Grade 7**

Harsh, biting sandstorms,  
like a thief, stealing vision.  
Bitter, cruel drought,  
not a drop of water in sight.  
Scattered across the desert, bodies lay  
not one thing could survive the fifty-degree heat  
dry bones, cracking under the extreme temperature  
yet, in the midst of the golden landscape  
specks of green stood out  
contrasting against the ocean of sand  
The cactus.

Steadfast against the harsh biting sandstorms  
Resilient to the bitter, cruel drought  
Scattered across the desert, they flourished  
the only thing enjoying the fifty-degree heat  
blooming under the extreme temperature  
in the midst of the golden landscape  
flowering bright flowers  
specks of yellow and red stood out  
contrasting against the ocean of sand  
The cactus.

**Wishes and Dreams**  
**by Marlene Schaff**  
**Lake Forest, IL, Grade 4**

Your mind is but a dream  
So let your wings spread wide  
Youth is but an age  
Wishes, dreams come to young and old  
An unspent wish or dream is nothing  
They come in unlimited quantity  
Whenever you want or need them, they are there  
Just on the other side of your imagination  
Lying there unspent, waiting to unfurl . . .  
Wishes and dreams

**A Lion's Pride**  
**by Angelina Chan**  
**Long Grove, IL, Grade 4**

With a roar as magnificent as a mountain,  
he prowls radiantly like the sun,  
sitting anxiously,  
serene but still prideful,  
gazing across the landscape.

He stands there in a paradise,  
fearlessly peering at the jungle,  
peeking at the vivid emerald shades,  
with a blanket of lush green leaves,  
crunching under his mighty paws.

He towers over a stony cliff,  
watching the amber sun,  
setting over the extensive trees,  
with his golden mane, so graceful,  
covering his almond eyes.

He gleams at the glowing moon,  
without worry,  
the twilight sky,  
shadowing over him,  
magnificently twinkling his eyes,  
but noticing the white, pearly stars.

**Wind**  
**Lily Wu-Laudun**  
**Lafayette, LA, Grade 4**

The wind whistled through the trees  
looking down on the silly, helpless people.  
She rippled, swirling, soaring, swinging, sailing,  
bouncing, skipping, tumbling, rolling, flipping,  
darting, flitting, fluttering, and dashing.  
High in the sky she flew above the birds, kites,  
even the tallest redwood trees.  
Slowly she turned into a breeze,  
softly strolling along her daily path.  
She could hear the wishes, dreams, and hopes  
of all the children.  
The trees waved to her,  
their long fronds swaying this way and that.  
Stretching, she reaches and grabs at thin air.  
Now it is a game,

her body always following her arms  
that hold an invisible grasp.  
She stops and perches  
on a tree branch.  
Now all is still.  
Even the trees do not bend  
under her weight.  
All is quiet.

**Brief Excerpts from Two Award Winning Stories:**

**The Pancake Wars**

**by Gibson Witz  
Carlsbad, CA, Grade 3**

Long, long ago, on an island called Chippy, in the middle of the ocean, there was a family of serpents and a family of people that lived on the island. The people called themselves the Reds, and the serpents called themselves the Serpents. Now the Reds were a very unusual family. First because they had 16 people in their family: two parents and 14 kids whose names were Mr. and Mrs. Red, Dave, Michael, Billy, Larry, Dylan, Lisa, Garrett, Kayla, Ryan, Jude, Charlie, Elena, Joe, and Rosie. Second because they all had three-yard long, red, puffy hair.

These two families both owned a pancake house. On this island, pancakes were very popular, and everybody ate them for breakfast, lunch, and dinner. The two pancake houses were the only ones on the island. There were 200 people on the island and 200 serpents. That's how the Pancake Wars started.

The Reds were always jolly, but the parents had one strict rule. There was a crevice between the two pancake houses and all the Reds weren't allowed to go beyond the fence that they built. But one day Dave got bored and he went around the crevice to the Serpents' house. He went to the chef's room. Nobody was in there. He saw a huge glass of green stuff that looked cool, so he grabbed it and took off. . . .

**Look**

**by Bek Shin  
Singapore, Grade 8**

People are like snow. Should you view snow from a narrow-minded perspective, you would see the many impurities that exist within each crystalline snowflake. However, should you open your mind and possess a broader perspective when looking at this frozen precipitate, you would see perfection. For great expanses, the immaculate blanket of white extends, enveloping all in its cold embrace as the feathery ice crystals dance gently to the ground. Likewise, people have their flaws, and if you choose to focus on them, you will never appreciate the beauty of the individual as a whole unless you keep open to the snow.

All the years I knew her, all those times she beat me in every conceivable way, I only ever saw her flaws.

Bryn. She was your average teenage girl, except for the fact that she was the physical embodiment of overachieving. Every single time an accomplishment—anything at all—was within my reach, my fingers would only grasp thin air. The chemistry or tennis trophy would always already have been in the hands of our darling Bryn, while I settled for second. That grin she perpetually wore on her too-sharp face annoyed me to no end, because it threw into stark contrast the ever-present scowl on mine. Moreover, there was something insincere about her; perhaps it was that she smiled slightly too broadly and gave me the unnerving impression that she was about to go for my neck. Call it jealousy if you must, but I just could not shake off the feeling of deep-seated dislike for her no matter how nice she tried to be to me. It made me feel such a prejudiced anger towards her, and even a few vestiges of guilt.

The day came when I finally saw the perfection of the snow.

My boots clicked against the pavement as I made my way home, hands in my light corduroy jacket. The wind was pulling at my hair and tying it into dead knots, but I hardly noticed as I stalked through one of the poorer neighborhoods on Queen Street. What am I doing wrong? I can't be the best in anything. Is it really so hard to excel in just one thing? Bitterness welled up inside me and seemed to pour out of my body until I found that my nails were digging into the palms of my hands where I had clenched my hands into fists.

I was rounding a corner when several things happened at once. I heard the sound of laboured breathing and the frantic slapping of trainers on the ground a heartbeat before the collision. A body crashed into mine, and there was a flurry of limbs; I felt strands of fine and silky hair and a forehead damp with perspiration. Looking down, I found myself plunging into the depths of ocean-green eyes on a small, yet gaunt, face of a seven-year-old. They told of an inner suffering that was made tangible in his too-small shoes and timeworn fleece jacket that seemed to have passed many hands. He was just another poor child from around the block, where people hardly had enough to survive by. . . .

A high quality of imagery, imagination, original thinking, and clear expression is obvious. One of the objectives of the Torrance creativity activity is to encourage teachers and parents to enable talented students to hone their talents in any or all of the four areas: creative writing, visual arts, musical composition, and inventions. They are then to submit their best work.

Teachers and parents have shared how they have used the writing rubrics to advance the cause of writing in their own class or home. We have heard teachers say, "I never knew I could advocate and evaluate creative writing based on specific, professional criteria. I have always been so flexible in my viewing creativity in writing that I never really asked my students to consider any framework to consider excellence or a goal to aspire to and attain so as to advance the skill of writing." Here are copies of the judge's rubrics in both poetry and stories. (See the links for these rubrics at the end of the article.)

The Torrance Committee on creative writing is committed to the goal of advancing the teaching of writing, especially creative writing, often stereotyped as lacking in substance or rigor. One of the pages written for students to encourage their own self-examination and perceptive assessment in writing skills, includes the following points. (The link for "Guidelines for Writers" is also at the end of this article.)

We hope that these statements encourage individual students to become more involved in the writing process. We hope that the "Guidelines for Writers" afford knowledge of what takes place in an effective writing process and product.

Parents are also encouraged to invite their children and young people to apply for the Torrance competition. One of these parents, Katie Haydon, herself a poet, shared a poem with us, and also a poem written by her young son. Katie's love for poetry and her participation on the Torrance Committee itself, has had a definite affirmative effect on both mother and son. Her enthusiasm has elicited other parents to encourage their children to take part.

Delight in the poem by Katie's second grade son, Christopher:

**Crackling Fire**

Hissing like a boa constrictor  
with huge flames  
of orange and blue  
rising up  
like a dinosaur's jaws  
with dust  
into the atmosphere  
through  
the  
red  
colored  
chimney  
for reaching the tippy top of the enormous mountain.  
you finally  
to driveway  
see steep  
as very  
you the  
are up  
walking

Katie shares "Fetterless" with us:

**fetterless**  
**by kathryn haydon**

some days  
I want to stay inside the poetry  
braiding word strands  
that weave  
gold into the shadows of this world  
lightening them with buoyancy to  
peak the endless cloud mountains  
that spread to the edges of the universe

where every day is clarity  
and freedom  
from ominous fog swirls  
that seep into my thoughts  
and try to coax them into  
spring traps and iron cages

but they can't

because every day is clarity

and freedom  
even in the fog swirls  
where golden light  
is woven through the shadows  
and illumines a narrow pathway  
for my thoughts

the thoughts, my solitary thoughts  
they climb the ladder  
and pierce through endless cloud mountains  
with clarity  
and freedom  
unconstrained by the edges of the universe

E. Paul Torrance, author of 1500 books and articles, identified ideas or topics for igniting creative responses from both adults, as well as children and young people. In 2014, these topics will be:

- Beyond Boundaries or Transcending Limits
- Courageous Endeavor
- A Huge Step Forward
- Finding, Discovering, or Uncovering a Solution
- Choosing a Brighter Tomorrow
- Building Anew

The topics reflect Torrance's philosophy of affirmation and encouragement, of imagination and the catalysts needed to expand creativity. The committee will use these topics for each of the 2014 areas: writing, visual arts, musical composition, and invention.

The 2013 Torrance topics, focusing on affirming the individual and his capacity, applied readily to the area of the visual arts. Stephen Schroth, Chairman of the Education Department of Knox College, Galesburg, Illinois, said he received many art compositions that effectively expressed these topics in a rich and original fashion. Submissions for the 2013 visual arts area came in from various parts of the country and the world. It is interesting to note that five of the winners in the visual arts for 2013 and one winner for creative writing came from a private British International School in Wroclaw, Poland. A teacher at the school, Joanna Schier, was so enthusiastic about encouraging the students to apply in both writing and art, that she and the school's art teacher elicited many drawings and paintings of excellence. The school presented the awards in school assembly attended by everyone. Teachers and administrators at the school believe that participation in the Torrance Legacy Awards has made a definite contribution to advancing the interest of faculty, parents, and children in the areas of creativity and the arts. As a result, joy, skill, and imagination at a depth level emerged for students to take part in an international competition of this quality. The students at this British International School in Poland have already begun to challenge their thinking to submit their work to the 2014 competition.

The third area, that of musical composition, was introduced in 2013. A sensitive, fresh approach from young people who live in different parts of the United States was enlisted. Jason Helfer, Assistant Superintendent of Education for the State of Illinois, serves as head of the music composition division. Similar to the other two areas, judges were chosen for their knowledge of the field and appreciation of student composition.

All on the Torrance Committee discussed at length a new and fourth area for stimulating and invoking talents—inventions. The dimension of inventions will be led by Connie Phelps, Professor of Education at Emporia State University, Kansas. She is excited about the new possibilities of inventions and of evoking student interest, and said:

Join the ranks of Leonardo da Vinci, Alexander Graham Bell and Ernő Rubik by applying critical thinking, problem-

solving and scientific principles to an original invention in three categories: arts and leisure, science and engineering, and toys and games. Qualified judges from the United States as well as Denmark will evaluate each invention category using a rubric based on criteria.

Inventions for 2014 will represent three major areas as designated by Chair Connie Phelps: Arts and Leisure, Science and Engineering, Toys and Games. Harry Roman, engineer, educator, and inventor, author of a new book, *Invention, Innovation and Creative Thinking in the Gifted Classroom: Activities & Design Challenges for Students in Middle and High School* (2014, Gifted Education Press), has written enthusiastically of the great need for schools to include both creativity and invention. It is anticipated that student response to this fourth area of the competition will enable participants to problem solve at an in-depth level, generate new ideas, and create innovative approaches to solving problems. Students will submit an invention individually.

Teachers and parents in this country and throughout the world are encouraged to share the Torrance flyer, which can be found at [centerforgifted.org](http://centerforgifted.org). Teachers and parents can readily see possibilities for student discovery and exploration. Open thought expands the framework for originating, imagining, designing, and implementing new ideas and activities. The stereotype of creativity as "loosey goosey" art projects dissolves for students as they understand better the challenge of participating in an activity which mandates creative vision and application. The increase in the number of students participating in the Torrance Legacy Awards each year indicates that more teachers and parents are reaching out to recognize and support the role of imagining, initiating, and pioneering to develop an idea to actual completion, whether a poem, a painting, a piece of music, or an invention.

The Torrance Legacy Awards affirmatively impact the role of teachers and parents as they seek to enable their students or children to mature in the capacity to communicate their vision and creative process. It is hoped that all students who see the possibilities for the Torrance activity as a thinking and learning experience will be able to create products that expand student imagination and deepen levels of insight. The number of students from other countries has increased, as has the quality of excellence in the products. All who work with children and young people are invited to take part in this unique learning experience that touches many lives throughout the world.

***Links to Torrance Legacy Award Information via Gifted Education Press Web Site***

**Guidelines for Writers --- [www.GiftedEdpress.com/Guidelines for Writers.pdf](http://www.GiftedEdpress.com/Guidelines%20for%20Writers.pdf)**

**Poetry Rubric --- [www.GiftedEdpress.com/Poetry Rubric.pdf](http://www.GiftedEdpress.com/Poetry%20Rubric.pdf)**

**Short Story Rubric --- [www.GiftedEdpress.com/Short Story Rubric.pdf](http://www.GiftedEdpress.com/Short%20Story%20Rubric.pdf)**

**Torrance Awards 2014 --- [www.GiftedEdpress.com/Torrance Awards 2014.pdf](http://www.GiftedEdpress.com/Torrance%20Awards%202014.pdf)**

**Joan Franklin Smutny, Chair**

**The Center for Gifted and Midwest Torrance Center for Creativity**

## **Creative Mindfulness in STEM Talent Development**

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First introduced in the early 1980s, the concept of Science, Technology, Engineering, and Mathematics or STEM talent development has emerged again in recent years as buzzwords in education. The Obama administration has begun a process of creating a STEM Master Teacher Corps for the purpose of identifying the best STEM teachers in the country (Larson, 2012). Education professionals are expanding early conceptions of STEM, using different versions of the acronym such as STEAM (Science, Technology, Engineering, Arts, and Mathematics, Krigman, 2014; Land, 2013; Madden et al, 2013; Peppler, 2013; Sharapan, 2012) and SECME (Science, Engineering, Communications, & Mathematics Enrichment, (SECME, 1999; Vickers, 1995). Inclusion of the “A” in STEAM encourages creative thinking, creative products and creative skill development. In the SECME acronym, the “C,” similar to the “A” focuses on forms and domains of creativity and the arts, such as journalism, social media, drama, creative writing, etc. The latter encourages the idea that the “T” in STEM should be incorporated in all aspects for SECME (Burnard, 2007; Nag et al, 2013; Rosales, 2009). Considering the integration of creativity and technology as a development tool, STEM scholars and business professionals can better address deficits in STEM skill development and gaps in STEM talent that lead to a shortage of qualified applicants who can fill STEM related jobs (Fogel, 2012). In a global workforce, a major implication for educators in teacher preparation programs is finding ways to teach traditional left-brain STEM subjects simultaneously with right-brained creativity skills (Vaidyanathan, 2012).

Appropriately, more university and K-12 school systems have been implementing STEM-ready programs. For example, state-level initiatives such as Florida Learns STEM Scholars (FLSS, 2012) and Georgia Department of Education (GaDOE, 2013) are opting for STEM development and certification programs. These programs represent the most novel strategy for solving the lack of STEM professionals (i.e. top-down, institutionalized, leadership and/or educational reform/changes) and for addressing developmental gaps with students in STEM disciplines. However, “insufficient research exists to inform educators, researchers, and policy makers about how they contribute to the development of STEM talent” (Subotnik et al, 2010, p.5). In a special issue of *Roeper Review* on the history and nature of STEM schools, which set the stage for exploration of creative STEM cognition as an integrated thinking process within STEM skill development, Subotnik et al (2010) offered a review of research on factors impacting the development of STEM talent, such as psychological, environmental, educational, cultural, and sociological variables.

The purpose of this article is to provide an analysis of skill and talent development in STEM disciplines relative to select literature on cognition and creativity. More specifically, a discussion of conceptualizations of mind-set, mindfulness, and mindlessness of STEM creativity is presented, calling for more in-depth research on the implications of culture on creative STEM cognition.

### **Connecting STEM Talent, Creativity and Culture**

Zha (2005), in a research study that explored the relationship between culture and creativity, found that although Eastern culture may stifle creativity, Japanese and Chinese students outperform American students in mathematics achievement and Americans scored higher on measures of creativity. These findings have been used to advance cultural explanations regarding differences in beliefs about and attitudes toward education, school organization, curriculum, teaching practices, and student activities (Zha et al, 2005). In

response to research along these lines, the National Science Foundation (NSF) Advisory Board was formed and charged to identify strategies for increasing the number of STEM innovators because too many of the nation's brightest students go unidentified and underdeveloped in STEM (NSB-08-82). The missed opportunity for developing students' potential is firmly believed to represent "a loss for both the individual *and* society" (NSF, 2010, p. 1). The NSF Advisory Board engaged in research addressed two realities: "the long-term prosperity of our nation will increasingly rely on talented and motivated individuals who will comprise the vanguard of scientific and technological innovation"; and "every student in America deserves the opportunity to achieve his or her full potential" (NSF, 2010, p. v).

Based on its findings, the NSF Advisory Board made three recommendations for identification and talent development and suggested ways to achieve the goal that included policy actions for NSF and other federal entities. These included:

1. provision of opportunities for excellence within the students' talent and interest that fosters creativity, engagement, and problem solving;
2. identification and nurturance of potential in all types of talent and demographics, especially from individuals whose talents may not have been manifested in academic achievement by developing and implementing appropriate assessment at multiple grade levels and properly training all stakeholders; and
3. fostering a supportive ecosystem of all stakeholders that work together to create a culture of excellence, creativity, and success of all students regardless of their race/ethnicity, gender, socioeconomic status, or geographical locale. (NSF, 2010).

With their recommendations, like much of the literature, creativity is discussed as a separate domain from STEM achievement (Bairaktarova & Evangelou, 2012; Householder & Hailey, 2012; Roth, 2010; Twissell, 2011; Vaidyanathan, 2012). Researchers and practitioners, alike, can encourage development of creativity skills within STEM content and to increase STEM skill by utilizing components of creativity (sometimes referred as an artistic mindset), but no extensive discussion exists to inform the actual creative cognition process that is embedded within STEM skill and talent. As a focal point, this separation and indirect disproportionality of skill development in creativity and STEM achievement encourage researchers and educators to look at an integrated account, and the nature of the creative process within the context of the scientific domain.

Rothenberg's (1996) research of creative work and scientific creativity of outstanding scientists offered a pathway to address these issues. In his study of Nobel-prize winning and past notable scientists, Rothenberg concluded that interrelated creative cognitive processes were prevalent in their thinking that led to such great achievements in science. More specifically, three processes emerged: the Janusian process (actively conceiving multiple opposites or antitheses simultaneously) as a mental operation played a significant role in development of creativity in theorizing, experimentation construction, and recognition of scientific facts and laws; the homospatial process (actively conceiving two or more discrete entities occupying the same mental space, a conception leading to the articulation of new identities) lead to the production of theory-generative scientific metaphors; and the sep-con articulation process (the conception and use of separation (sep) and connection (con) concomitantly with the production of creative integration) that operates as an "overall constructive creative process" (p.207). Focusing solely on the Janusian process of scientific creativity, this article documented and described a complex process involving four phases of development over an extended period of time: motivation to create; deviation or separation; simultaneous opposition or antithesis; and construction of the theory, discovery, or experiment (Rothenberg, 1996).

Coxbill, Chamberlin, & Weatherford (2013) explored ways to identify and develop STEM creative students and differentiated mathematical creativity from mathematical achievement for the purpose of identifying math talent potential. Cross-discipline accepted traits of creative gifted students coupled with the Kruteskii math paradigm was used to conceptualize the idea of mathematics creativity. The researchers' critical investigation and use of model-eliciting activity (MEA's) as a tool to identify potential in students who are mathematically creative resulted in an authentic task and intervention approach to also develop mathematical creativity. Coxbill et al used transfer and threshold theories of creativity to inform the methodology. The broader impact of their methodology offered a framework for change in mathematical teaching and curriculum by providing a protocol for identification and development of mathematical creative potential that was already at the crossroads of STEM and gifted education. (Coxbill et al, 2013)

### **Engaging in Creative Mindful Process**

Embedded in mathematical (or STEM) creative development are mental processes that distinguish them from desirable mental processes in STEM talent development or creativity development alone. Transitioning to STEM talent development outside of STEM content areas to include a focus on STEM skills as a way of thinking in any and all domains allows us to integrate the creative

cognition process within a STEM mindset. Aaron C. Clark (2012), researcher in design and technology education, agreed that STEM education is a new way of thinking; he asserted that it is “a new discipline that involves integration, new content areas of study for our students, and new assessment strategies” (p.34) that should include other areas such as technical communications, logic, visualization, creativity, etc. that are not taught “as individual content areas within a discipline, but ... as example core areas that allow for simple streamlined integration across all fields of STEM education” (p.34). He urged that “we, as a profession, need to conduct research in areas associated with creativity and critical thinking and begin to strongly include the discipline of design into the secondary and post-secondary curricula for [STEM] fields” (p.34). In “Fostering Brainstorming to C-Sketch to Principles of Historical Innovators: Ideation Techniques to Enhance Student Creativity,” White, Wood, and Jensen (2012) attempted to make this connection between STEM knowledge, creativity, and divergent thinking based on the comparative study of deployment of techniques by freshman and senior undergraduates. Their goal was to “understand if the suite of techniques enables students to generate a large quantity of diverse concepts and if the suite enhances the creativity of the students” (White et al, 2012, p. 12). Again, we see an effort to connect creative cognition and STEM but in terms of one enhancing the other, thus separating their existence from each other. Although Clark’s (2012) perspective is closer to integrating creative cognitive processes and STEM skill development than other STEM researchers and educators, he still distinguishes creativity as a separate hands-on skill that can be incorporated into design fundamentals and visual thinking as an interdisciplinary focus rather than a single construct or natural process of thinking.

Langer, Faulk, and Capodilupo (2004) conceptualized a natural process of mindfulness (or mindlessness). They asserted that one’s mindset, or cognitive commitment based on experiences and expectations from the past, affects self-perception and ability to effectively engage in the present. Mindfulness is an active awareness of the present, environment, or situation. They found that if the mindfulness process is provoked through mindful creativity, there is an increase in engagement and, consequently, perceived competence. For educators, recognizing this creative cognitive process is especially beneficial in STEM skill development where perceived incompetence may exist. (Langer et al, 2004)

### **Creative STEM Cognition**

Runco and Chand (1995) in their article, “Cognition and Creativity” discussed an innovative way of exploring cognitive research and “a need to understand processes which are not recognized unless one is specifically interested in creativity” (p.234). An original model of creative thinking, noted as strategic in and of itself, was presented along with a review of traditional cognitive topics such as knowledge, classification, judgment, etc. A discussion of the impact (fosters or inhibits) of procedural and declarative knowledge on creative thought was offered. They explained procedural knowledge as the metacognition that dictates procedures for strategic thinking while declarative knowledge is factual information. They suggested that procedural knowledge (also referred to as know-how) increases originality and flexibility components of creative thinking and declarative knowledge by providing requisite information, and ideational fluency. Both types of knowledge were described as contributing (rather than controlling) factors dependent on the primary components – problem finding, ideation, and evaluation – of creative thinking. They offered the idea of problem finding as a solution to ensure creative performance along with a discussion on motivation, personality, and style. Specifically, Runco and Chand reported that intrinsic motivation helped to explain creativity in the natural state. In other words, self-perception of competence serves as an intrinsic motivator, enhanced by the creative cognition process of mindful creativity and not the other way around. Individuals might not be motivated to perform if they do not possess the evaluative skills to determine that a gap exists and what needs to be done or created. Evaluation, or judgmental processes, is distinguished, in part, as evaluation skill that requires originality and creativity as criteria along with critical thinking skills for accuracy. Judgment, itself, requires classification skills that are often associated with creative thinking due to the perceptual process of categorical interpretations (Runco & Chand, 1995).

Considering the nature of the STEM discipline, it is expected, then, that students with more STEM procedural knowledge would generate more original STEM ideas while the students with more STEM declarative knowledge would generate more appropriate or useful STEM ideas. Further, it seems that it would follow that an increase in both types of STEM knowledge would increase evaluative or judgment skills and vice versa. However, a study conducted by Charles and Runco (2000) focused on the increase in originality judgments and confirmed that a decline in creativity is accompanied by an increase in evaluative skills. This seems to contradict the idea that very effective evaluative STEM skills – even in the most logical, rational, thinking – require a constant practice of creative thinking.

### **Future Research**

Runco and Chand’s (1995) discussion affirmed the need for researchers to explore creative STEM cognition as a natural, integrated and interrelated thinking process along with external factors that could impede its function in STEM talent development and achievement. Expanding on Zha’s (2005) findings that culture stifled (or fostered) creativity, cultural differences represent one

category of those factors. Torrance (1962) contended that cultural discontinuity between the home and school contributes to mental walls or intellectual blocks of creativity that inhibit the development of creative thinking. Understanding that creative STEM cognition leads to STEM innovation and increased capacity for global STEM competitiveness (Robinson, 2010; Rosales, 2009; Vaidyanathan, 2012), it is also necessary for researchers to expand the definition and discussion of creativity to include timeliness of innovation. Not only can STEM innovation be useful and original, but in a global market, timing is essential as well. An important implication for educators is that they need to teach and encourage behavior that promotes risk taking and enhances creative mindfulness.

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## Preventing Gifted People from Falling by the Wayside

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### I. Introduction

There is a very great amount of literature on helping gifted children to develop. In addition to *GEPQ*, there is the National Association for Gifted Children with publications and other resources. The NAGC website states the following: "What is gifted? Gifted individuals are those who demonstrate outstanding levels of aptitude or competence in one or more domains." They do wonderful work, and there is a lot of truth in what they say. I would define gifted differently. One of the principles developed by the Enlightenment is the need for both rational thought starting from clear principles along with empirical evidence. I would define a gifted person as someone who has accomplishments that testify to his giftedness.

Gagné<sup>1</sup> makes a point similar to this, indicating the difference between giftedness and talent.

Emerick<sup>2</sup> writes about underachievement among the gifted. This underachiever who never accomplished anything in his life is not a gifted person, according to my definition. Instead, we say he has the potential for being gifted. Likewise, a person who according to standard definitions is not gifted but who has great accomplishments, I would say is a gifted person. There are many examples of this. Walt Disney's school principal said to him, "You'll never amount to anything." That is, according to the NAGC definition, Disney was not gifted. However, we see from his accomplishments that he was indeed gifted.

There are many types of gifted people, e.g., great musicians, performers, and scientists. In this discussion let us consider only people who have the ability to understand, analyze, communicate, and create complex new and important ideas.

The extensive literature on this topic deals with how we can encourage and develop gifted people. This paper will deal with things that teachers and other leaders do to stymie giftedness. It is one thing if the teacher knows the student to be gifted based upon tests and grades. It is quite another thing if the teacher has no idea that this person will in the future accomplish great things, even if there is no indication now. Educators need to be very careful not to thwart a potential genius.

This article will be informative for educators who want to be more honest in teaching gifted students, and will increase their awareness of serious institutional blocks to educating the gifted.

There are things that a gifted person can do that would cause the leader (teacher, professor, or manager) to lie and so thwart the person's advancement. This person may then think he really is not gifted, and is unwilling or unable to fight the forces putting him down. History is replete with stories of people who succeeded in fighting these negative forces and have proven themselves gifted. However, there are many who have not succeeded. There is no way to determine how many such people there are. We need to seriously confront this problem.

We need to understand more about liars. There are many psychological studies on why people lie. Here we are interested in the fact that liars exist. We need to stress that we are discussing groups and organizations that lie, as opposed to individuals lying. We must be aware of the existence of liars if we wish to prevent thwarting of giftedness.

### II. Lying

There are various forms of lying that we need to understand. We need to know how to suspect a person or group is lying. We need to have thoughts on what to do when dealing with liars. These points will be discussed below. Psychologists discuss why people lie. Here we are concerned about the fact of lying. Moreover, we are concerned about powerful groups and organizations lying, and in

this case, the psychology is very different. An important point is the need to focus on liars, individuals or organizations, rather than on the lies themselves. This focus will allow us to decide what to do to help the gifted when confronted by liars.

*One form of a lie* is making a clear, unambiguous statement knowing it is false. Examples are Senator Tom Harkin's recent rosy statements about Communist Cuba, and Obama's rosy statements about Obamacare. Harkin knows how terrible things are in Cuba, and so his rosy statements are lies.

*A second form of lying* is responding to someone's statements by distorting the statement and then explaining why the distorted statement is false. This happens very often in political discussions.

*A third form of lying* is deliberately using faulty logic. Someone makes a clear statement that sounds logical but the logic is faulty. This is the most harmful type of lying. A teacher who lies in this manner about a student may prevent him from demonstrating his giftedness.

An example is an editorial saying that since A happened, and then B happened, then concluding that A caused B. Middle School students know this logical fallacy. Sadly, a newspaper wrote that event A is President Clinton raising taxes, event B is the subsequent booming economy, and concluding that raising taxes will result in a booming economy. Event B, the booming economy, was caused by events that happened several years prior to Clinton's raising taxes. Government actions a few years earlier were the reasons for the boom. The newspaper knows this fact, and so the statements were lies. Another example is Nancy Pelosi's statement, "We have to pass the bill so that you can find out what is in it" is clearly illogical, and so is a lie.

*A fourth form of lying* is responding to statements discussing things based upon goals clearly different from the goals of the original statements. For example, a goal of residents of a country is for national security and internal justice. Many leaders have the goal of increasing their personal wealth, which is a very different goal. When such leaders make statements, they are lies, as they are based upon different goals. When Bernard Madoff discussed investing with his clients, his goals were his personal enrichment, which was very different from the goals of his clients. They did not invest with Madoff so that he should become wealthy.

If we suspect a person of lying, we have to think carefully about what actions to take. If a person feels he is gifted, and his teacher puts him down, he should suspect the teacher is lying. A professor of mine told me that people who are gifted know that they are gifted. Such a person should believe himself rather than the teacher. Likewise, parents often know when their children are gifted. We must be on guard to prevent teachers from thwarting the giftedness of the student.

An example is from my discussion about professors who substitute teach in high school.<sup>3</sup> Teachers are often reluctant to allow professors to substitute in their classes, and lie to the administration so that the professor will not be a sub. Likewise, if a brilliant student knows more than the teacher, the teacher may be embarrassed and lie about the true capabilities of the student, thwarting future giftedness.

### **III. Examples of leaders thwarting possibly gifted students**

*Some specific examples of how leaders can harm others.* Seymour Roger Cray was a computer engineer. While working at CDC, he started the development of a supercomputer. Due to some friction with management, he left CDC and founded his own company. He designed computers that were the fastest in the world for decades. Cray was clearly gifted.

Now imagine another genius like Cray. When the friction with management began, the person yielded and did not leave to start his own company. The results of his life would not be as great. No one would say he was gifted. The management successfully thwarted the genius. They knew what he could do, and lied for their own personal reasons whatever they may be. I'll leave this to the psychologists to discuss the reasons. Here we are discussing the facts, which are that the management lied.

Here is another example. People tend to praise Thomas Edison for developing electrical power lines so that our cities can benefit from electricity that is generated elsewhere. The truth is that Nikola Tesla deserves the credit. Edison pushed direct current that was inefficient for long distance transmission. Tesla promoted alternating current that is used today. Edison harshly criticized Tesla who

was not only was gifted, but also a fighter who successfully defeated the powerful Edison. We see from this story that gifted people need not only giftedness but also the determination to fight.

*Some examples of liars from my personal life.* While in graduate school I took a course in electricity and magnetism, using the text by Panofsky.<sup>4</sup> Something in the book did not make sense to me. We corresponded. After voluminous correspondence, I was sure Panofsky was wrong. Panofsky never agreed with me, and I published papers in peer-reviewed journals.<sup>5</sup> It may be useful to explain this, as it is easy enough for someone who is not a scientist to understand.

Imagine a physics laboratory in a truck moving slowly in a straight line. Someone throws a ball to a catcher in the truck. The speed of the ball when it hits the catcher is the speed the ball had from the pitcher less the speed of the truck, if the truck is moving away. Mathematically we explain this as a transformation. High school students learn this. We call this the Galilean transformation.

What about light? Light is derived from the 19<sup>th</sup> century equations of electricity and magnetism, and the speed of light just depends upon the various constants of electricity (Coulomb's Law) and magnetism.

We postulate that all laws of nature seen from a moving truck must be the same laws as seen from the lab on the ground. We shine a light on the truck. The moving lab measures the same velocity as the ground lab. The reason is that the speed of light is given in terms of the various constants of electromagnetism, and has nothing to do with the speed of the truck. The only way we can get the same speed is if we use a different transformation, called the Lorentz transformation. For slow speeds it is the same as the Galilean transformation. This was developed by Albert Einstein in 1905, and called the Special Theory of Relativity. The idea is simple enough that a young student can comprehend it.

Now the ground lab does a different experiment. Two guys try to turn something, such as a book, but the forces are balanced so that nothing happens. This is called equilibrium. Now the lab in the truck looks at these two guys. The moving lab takes measurements of the forces at the same time in the truck. Due to the Lorentz transformation, the truck lab finds the forces do not balance.

Panofsky tried to explain this weird thing by inventing strange forces that keep the book in equilibrium. This is unnecessary by using the Lorentz transformation, not only the velocity transforms, but also the times. The truck lab looks at the forces at the transformed times, and finds that the forces balance. Panofsky's weird forces are simply not right. By the way, Panofsky was the head of Lawrence Livermore Laboratory, and one of the world's leading physicists.

The Galilean transformation does not involve time. Every baseball player knows this. Run towards a ball, and the ball will hit you faster than if you stand still. The Lorentz transformation involves time, as it must, in order for the speed of light to be the same, not like a baseball.

Now imagine that I am an undergraduate student with Professor Panofsky. We start discussing this issue in his book. After a while he decides to stop talking about the subject. If I insist, he may fail me, or else not write a letter of recommendation, so that I would be unable to go to graduate school and get a Ph.D. and become a professor. No one would know the truth, that Panofsky thwarted his gifted student.

This is so easy that I am sure Panofsky really agreed with me, but lied, making up his nonsense forces.

Here is a more recent example. Steven Weinberg derived<sup>6</sup> Einstein's General Theory of Relativity by making a few assumptions. One is that a certain mathematical quantity is zero in the empty space near a mass, even though the energy is not zero. We corresponded, where I said that his statements in his current email are different from the statements in his book. After some correspondence, Weinberg said that he will not reply any further to me.

Suppose I were an undergraduate student in Professor Weinberg's class on gravitation. We have this discussion in which he says he will not reply to me. Again, if I were his student, he may have thwarted my future career. After all, he is a Nobel laureate and I am just a student. This is an example of a gifted person thwarting gifted students.

*Some historical examples of liars.* Pope Urban III condemned Galileo for his ideas about planetary motion based upon a telescope which Galileo built. One can make a case based upon historical studies that the Pope knew Galileo was right. Since the Pope was the head of a large powerful organization, he thwarted generations of gifted students.

We can make a similar argument about Islamic and Chinese education and the paucity of gifted scientists. By stressing rote learning, they lie when someone presents original thoughts. Sadly, some American teachers stress rote learning and excluding original thinking, and so thwart the gifted student. We must be on our guard about these types of things if we wish to help the gifted.

#### **IV. Our national goals**

In summary, let us never forget that the United States is the greatest nation in the world, in spite of many of our leaders who do not agree. In a few centuries we have changed and mastered the world for the benefit of all. Look at the building of transcontinental railroads and highways, electric power for everyone, satellite communications, computers to analyze data, medical discoveries that save lives and improve the quality of life, and much, much more. We have successfully defeated evil tyrannies that endangered our lives. These things were accomplished by gifted individuals and organizations of individuals, operating freely with a minimum of government restrictions. Other countries learn from our efforts and imitate them, but we Americans usually develop them first, because of the freedom Americans have – more than other countries.

We need to insure our gifted students continue to have the full freedom of thought while in our schools and universities. We need to strive for less government influence so that students have maximum freedoms. Our educators need to focus on developing this freedom and not to feel threatened by gifted students. We must all realize that no matter how accomplished we are, there are always others who are better. We must not feel bad when in contact with such brilliant people, but happy at the opportunity to grow ourselves by helping others grow and develop.

<sup>1</sup> Francoys Gagné, *Gifted Child Quarterly* **29**, 103-112 (1985).

<sup>2</sup> L. J. Emerick, *Gifted Child Quarterly* **36**, 140-146 (1992)

<sup>3</sup> Sanford Aranoff, *Gifted Education Press Quarterly*, **27**, 4-9, Winter (2013).

<sup>4</sup> W. K. H. Panofsky and M. Phillips, *Classical Electricity and Magnetism*, p. 317 (1962).

<sup>5</sup> Sanford Aranoff, *Il Nuovo Cimento*, **10B**, (1972).

<sup>6</sup> Steven Weinberg, *Gravitation & Cosmology*, p. 155 (1970).

## **Making Things Happen in Your G&T Classroom**

*(From Gifted Education News-Page April-May 2014)*

**Harry T. Roman**

**Inventor, Author, Teacher**

More and more, the teacher's time is constricted. Freedom in the classroom is radically constrained by regulations and standards imposed upon teachers and their gifted students. Academic freedom is rapidly disappearing, if it has not already. Many teachers who invite me into their classrooms must go to great lengths to integrate my time into their already cramped academic day. In this article I offer suggestions, some unusual and perhaps uncomfortable for you at first, for getting the most out of your classroom time. I hope you find my insights useful.

### **Making Things Happen**

There is no priority or ranking of the suggestions that follow, just an attempt to get them out on the table for your consideration.

Team up with parents to provide special experiences for your class. While this may not be able to be accomplished during normal class time, there are always evenings, weekends, and after school to make the magic happen. Make sure to prep your parents ahead of time so they know their input on home work or project assignments will be needed. Maybe the G&T students can develop a

website/newsletter you can use to keep parents informed about what is happening in class – or maybe an e-blast technique or perhaps some other creative use of media.

Work closely with your PTA/PTO. Maybe they can put some pressure upon the district and local schools. Have gifted students make presentations before PTA or PTO members so they see the kinds of things these students are capable of doing. Invite PTA/PTO folks into your classroom to see gifted students in action. They will know how to influence the administrative staffs in both your school and district. If you do not have a gifted parents' group in your school or district, start one or piggy-back onto one that is established and well-known.

Do some things that lead to you and your students being written up in a local paper or maybe in your district's website/newsletter. Positive press makes people sit up and take notice. It can often be the "Open Sesame" mantra that provides you with time, resources, and some freedom to do other things to benefit your students.

Write an article with many photos of students in action and publish it in a professional magazine, newsletter, conference paper, and the like. Teacher-written articles are always welcome by educational magazines. I have done this with several middle school teachers I have worked with, and their principals took immediate notice, one asking a teacher to start a new special school program. Nothing succeeds like success. Never underestimate the power of the written word.

Try an after-school invention club for students who have a special desire to create new things. Give the club time to shake-out and get down to a core of committed students. Turn on that creativity outside of the normal classroom routine and watch the students respond! I have seen students develop ideas worthy of patents and possible new businesses.

Make parents a part of the educational team and have them work with their students to develop ideas for new products. Urge the parents not to take over the project, but serve as mentors and sounding boards, helping their students see the multi-dimensional aspects of problem-solving. The students can do some foam-board presentations for display in the classroom or in a central location in the school. Here is a terrific way to get creative juices flowing.

Learn about Thomas Edison and study his incredible legacy of invention and new industries. Many schools and STEM programs are re-discovering this icon of invention. Check him out at [www.edisonmuckers.org](http://www.edisonmuckers.org). Enjoy the wealth of facts and figures and teacher resources on this website. Explore Edison's big inventions and the major industries he created. Identify and assess the value of his work, and how it created our modern world.

Bring in creative speakers from the engineering, architectural, literary, invention, and fine arts areas to talk to the students and their parents. Perhaps this can occur in the school during after-hours; invite teachers and interested students and parents to attend. I think you may find this type of activity draws lots of folks....and do not forget to take the opportunity to "plug" yourself and your students. Let the community know who you and your students are!

Host an invention contest in the school where everyone can participate. Choose a topic for students to focus their designs, and establish a judging rubric for selecting the top designs. Ask engineers, inventors, scientists, and researchers to serve as judges. Use this exercise as a way to integrate the curriculum and promote multi-dimensional problem solving. I have attended and participated in such events and parents become quite excited about seeing what their children and friends can invent. The feedback to the school is usually quite strong. Get the event covered by your town newspaper.

Establish a connection with your town's council or board of supervisors to give G&T students a more enhanced learning experiences. Bring them to a council meeting to see how new projects proposed in your town involve complex problem solving.....a multi-dimensional look at many factors.

Maybe the council would like to sponsor a project for your students to try and solve, for example:

-What to do with an open parcel of land? -How to reduce traffic congestion in certain parts of the city? -How to use the land from an old abandoned right of way? -How to use old factory buildings?

All schools have their own concerns and problems, and this could be valuable to apply in your classroom, such as:

-How can you reduce traffic congestion at drop-off and pick-up times? -What can be done in the school to reduce fossil fuel energy use? -What will the schoolrooms look like in 25 years? -Can your students envision and design an addition to the school? -How can your school have face-to-face discussions with other children all over the world?

Imagine what creative ideas students can apply to their school. They have an incentive and ownership here to make something really extraordinary happen. Empower them and turn them loose! Show your district and local administrators what can happen when academic freedom is given and properly applied by you.

Determine if a local company might want to sponsor your class and school – visiting and hosting some design challenges, providing inspirational speakers, doing special projects with the students, teaching them about life after school and the modern business world. The school-to-work approach can be very illuminating to students and particularly interesting to parents.

### **Let Your Students Help Tell the Story**

Make your classroom shine so much that your students will be talking to others about what goes on. Who does not want to tell friends the cool things they are doing? Motivate your gifted students and they will create the buzz.

Allow them to decorate the room and make it appealing and exciting. Put a bulletin board outside the classroom with incredible things displayed there. Make it a magnet that pulls others around to peek inside the classroom.

Props are a big plus for students to touch, feel and discuss. Have them write away to companies and researchers who are doing really amazing work in hot technology areas, asking for props and demonstrations you might use in your classroom. The more students handle things, their questions and interest will increase exponentially, and so will interest in your classroom and what happens there. This news will reach administrators and they will soon be stopping by to see what is happening. That can mean more freedom to do other things.

Figure out a way to set your students apart – maybe with pins or buttons they wear and a slogan that epitomizes who they are, and what they do as a team. Let you G&T students develop their own identity.

Ask students to invite other teachers to stop by and visit your class – maybe to address some aspect of a subject, topic or technology you are discussing.

Take students outside the school, walking around and observing mundane things like power lines, traffic signals, streets and roads, and neighboring structures. Discuss how the technology developed to build this infrastructure. Imagine what such infrastructure might look like in the future. Maybe they can build models of the area around the school and highlight how math and science are related to all of this.

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Make your own opportunities to focus excitement around the classroom. Do not wait for others to do it. This is a good fight to engage in. There is much valuable learning to happen outside the often stultifying codes and standards imposed upon schools, teachers, and students – often by people who have long left the classroom, or perhaps never had the privilege of teaching there.

Your job is to unleash the talent of your gifted charges, and that time is excruciatingly important. Teach them in spite of organizational rigor mortis. Sidestep the beast of bureaucracy and make something of lasting value they will always remember. Fight the good fight!

## Five Gifted American Movie Directors: Archivists of the Second World War

Michael E. Walters

### Center for the Study of the Humanities in the Schools

“In the summer of 1941, the columnist Stewart Alsop had written a piece for *Atlantic Monthly* called ‘Wanted: A Faith to Fight For,’ that caught the eye of General George Marshall. In the essay, Alsop warned, ‘To fight the war we will be sooner or later called upon to fight we need a crusading faith, the kind that inspired the soldiers of 1917, setting forth the war to make the world safe for democracy....’” ***Five Came Back***, 2014, The Penguin Press, p. 7.

Recently a book was published about the cinematic crusade that was accomplished by five major film directors of the twentieth century: ***Five Came Back: A Story of Hollywood and the Second World War*** by Mark Harris (2014, The Penguin Press). The years of 1941 to 1945 have been described as the period of “The Greatest Generation.” The United States and its allies – Great Britain, Canada, France, Belgium, The Netherlands, Denmark, Norway, the Soviet Union, China, Philippines, Burma, New Zealand, and Australia – were in an epic struggle against Nazi Germany, Italy and Japan. The beginning of the war (1941-43) was “the Winter of Our Discontent.” Five American film directors (John Ford, George Stevens, John Huston, William Wyler, and Frank Capra) were enlisted by The War Department to create documentaries for purposes of bolstering the spirit of democracy against fascist powers. This conflict was concerned with the soul of Western civilization and humanity. The Nazis and Japanese had spent a decade indoctrinating their citizens to the cause of totalitarianism, oppression and genocide. Most of the American soldiers, unlike their European allies, had to have reasons in order to defend democracy. The five film directors provided reasons, and thereby contributed to the morale of the American soldier and the national populace.

These directors produced during the 1930s films that won Academy Awards, and were major expressions of the twentieth century American cinema, e.g., Frank Capra’s ***Mr. Smith Goes to Washington*** (1939), John Ford’s ***The Grapes of Wrath*** (1940), and John Huston’s ***The Maltese Falcon*** (1941). After the Japanese attack on Pearl Harbor, they left their lucrative Hollywood careers and became cinematic archivists for the US Army, Army Air Forces, and Navy. They made many combat films and risked their lives while shooting such ordeals as ***The Battle of Midway*** (John Ford). In addition, George Stevens filmed the liberation of the Dachau Concentration Camp. John Ford personally delivered to the families of Torpedo Squad 8 the Midway film because most of them were killed in action. For the families and neighbors, this documentary gave meaning to the deaths and suffering of loved ones.

It is important for gifted students to understand and sympathize with American history. The appreciation of these film directors places giftedness in a spiritual and historical context. The last paragraph of ***Five Came Back*** illustrates their emotional impact and humanistic commitment. It tells of the background of George Stevens’ film about Anne Frank: “Shortly after the war, Stevens packed up all of the color footage he had shot overseas, from North Africa to D-Day to Dachau, and drove it to a Bekins storage facility in North Hollywood. The footage had never been shown publicly. He carefully labeled each canister with titles like ‘Eyewitness at Dachau’ or simply ‘Atrocity.’ He retrieved the reels only once, in 1959, when he was preparing to direct *The Diary of Anne Frank*. Alone in a screening room, he started to watch what he had shot, but turned the projector off after the first minute, returned the canisters to North Hollywood, and locked them away once again. Only his son and a few close colleagues knew of the existence of the film. It remained in storage until his death.” ***Five Came Back***, 2014, The Penguin Press, pp. 443-44.

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Please see our STEM Matrix of FIFTEEN Books for the Gifted from Gifted Education Press! [CLICK HERE](#). I would appreciate your sharing this link with colleagues in the Gifted, STEM, Technology, Science, Math, Career Education, and Language Arts/English areas. Thank you, M. D. Fisher Publisher

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