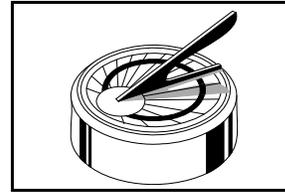


# GIFTED EDUCATION PRESS QUARTERLY

10201 YUMA COURT  
P.O. BOX 1586  
MANASSAS, VA 20108  
703-369-5017



WINTER 2008  
VOLUME TWENTY-TWO, NUMBER ONE

[www.giftedpress.com](http://www.giftedpress.com)

Happy Holidays! In an effort to counteract the negative effects of No Child Left Behind (NCLB), educators and parents should consider using the antidote of stimulating library experiences. No librarian should be left behind (NLLB!) in providing a wide range of resources for educating gifted students, and a pleasant setting which helps to fulfill core principles for gifted education. The opportunity to explore different subjects by reading books and using other types of media can open up new areas of knowledge, and provoke the necessary intrinsic motivation for discovering new interests without worrying about passing state mandated tests. Here are a few areas that would be particularly effective in library learning for gifted students at all grade levels:

- Emphasizing the study of *All Knowledge* in a comprehensive curriculum that has numerous opportunities for in-depth leaning (Virgil S. Ward).
- Using *Inquiry and Discovery Learning* to expand the breath and depth of curious students' knowledge (Jerome Bruner).
- Providing numerous opportunities for the expression of *Multiple Intelligences* (Howard Gardner) by offering a variety of appropriate resources – books, CDs, DVDs that challenge specific intelligences.
- Applying the *Enrichment Triad Model* (Joseph S. Renzulli) in a manner that nurtures gifted students' interests, and helps them to organize and apply recently acquired information to solving real-life problems.

By using these theories and learning models under the guidance of knowledgeable librarians and teachers, advanced students can also acquire a lasting interest in the humanities as a unified area of study. The availability of library books and related media in the following areas should serve as the foundation for such a unified curriculum: history, philosophy, languages, literature,

poetry, art, English grammar and principles of clear writing, politics, and current events. These subjects in combination with biographies and scientific and mathematics books will expand their knowledge and interests far beyond the “teaching and learning for the test” mentality that currently dominates the public school curriculum. With extensive study by teachers, librarians, students and parents, the Dewey Decimal Classification system may indeed become the revitalized foundation for stimulating gifted education programs.

This issue contains the following articles: ● Discussion of the poor state of research on minority students, particularly in the gifted field, by Professors Donna Y. Ford (Vanderbilt University), Gilman W. Whiting (Vanderbilt University), James L. Moore III (The Ohio State University), and Tarek C. Grantham (University of Georgia). They make several recommendations for improving this situation. ● Joann P. DiGennaro, President of the Center for Excellence in Education, describes an important program for gifted high school students – the International Biology Olympiad which is sponsored by CEE. This Center was co-founded in 1983 by Admiral Hyman G. Rickover and Ms. DiGennaro. ● The article by Professor Sanford Aranoff of Rider University contains some excellent pointers for teaching gifted students, and is based upon his recent book, **Teaching and Helping Students Think and Do Better** (2007). ● Stephanie Giese is a teacher of the gifted in the Hillsborough County Public Schools (Tampa, Florida). She summarizes the impact of No Child Left Behind on her gifted students, and offers some ways of dealing with this problem. ● Michael Walters discusses Alistair Cooke's interesting journey through America during the Second World War.

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

## MEMBERS OF NATIONAL ADVISORY PANEL

**Dr. James Delisle** — Professor and Co-Director of *SENG*, Kent State University, Kent, Ohio

**Dr. Jerry Flack** — Professor, University of Colorado

**Dr. Howard Gardner** — Professor, Graduate School of Education, Harvard University

**Ms. Margaret Gosfield** – Editor, Gifted Education Communicator, Santa Barbara, California

**Ms. Dorothy Knopper** — Publisher, Open Space Communications, Boulder, Colorado

**Mr. James LoGiudice** — Director, Program and Staff Development, Bucks County, Pennsylvania IU No. 22

**Dr. Adrienne O'Neill** — President, Stark Education Partnership, Canton, Ohio

**Dr. Bruce Shore** — Professor and Director, Giftedness Centre, McGill University, Montreal

**Ms. Joan Smutny** — Professor and Director, Center for Gifted, National-Louis University

**Dr. Colleen Willard-Holt** — Associate Professor, Pennsylvania State University - Harrisburg

**Ms. Susan Winebrenner** — Consultant, San Marcos, California

**Dr. Ellen Winner** — Professor of Psychology, Boston College

## Conducting Cross-Cultural Research: Implications for Gifted Education

**Donna Y. Ford, Ph.D.**  
College of Education  
Vanderbilt University

**Gilman W. Whiting, Ph.D.**  
College of Arts and Science  
Vanderbilt University

**James L. Moore III, Ph.D.**  
College of Education and Human Ecology  
The Ohio State University

**Tarek C. Grantham, Ph.D.**  
College of Education  
University of Georgia

In 1998, Ford reported that less than 2% of publications in the field of gifted education focused on culturally and linguistically diverse (CLD) students. Since that time, more work has been published, including studies. However, a neglected topic has been the issue of educators and other social scientists conducting research on or with diverse student populations. Little attention, if any, has focused on the concept of “racially, culturally, and linguistically responsive research.” We argue in this article that there is a need to examine knowledge, skills, and dispositions needed by social scientists and practitioners (e.g., teachers, school counselors, psychologists, etc.) involved in cross-cultural research. We contend that problems exist when researchers, the majority of whom are White and middle class, conduct research on African American, Asian American, Hispanic American, and American Indian students and their families and communities.

Stanfield (1985), Tucker (1994) and Gould (1981, 1995) have discussed the socio-political nature of research, not just historical research but also contemporary research. They have urged us to consider, when conducting research, how self-interests and biases have contaminated research on and with CLD groups. They urge scholars in all disciplines to consider seriously and reflectively the science and politics of racial or cross-cultural research. As Sue and Sue (1999) noted: “One issue has bedeviled psychology for many decades – namely, the relationship between racial and ethnic bias and the practice of psychology” (p. 1070). Specifically, they note that issues over race and intelligence, test bias, the design and interpretation of research on CLD groups, and stereotyping are prominent and contentious themes. Relatedly, Thomas and Sillen (1972) discussed “scientific racism” and the ways theories and empirical research perpetuated a biased view of African Americans and other diverse populations. Yet, in our preparation as researchers from three different universities, little, if any, discussion was given to this notion. Instead, we recall readings and discussions presenting researchers as neutral, objective, and impartial. The message we received was: ‘despite being human beings, when donning our garb as researchers, we are bias free.’

We disagree with this image of researchers being superhuman, a paragon of virtue, as does Banks (2006) who stated: “social scientists are human beings who have both minds and hearts” (p. 4). If this assertion is accepted, then what makes researchers so

different from other professionals that they could be so neutral, objective and impartial? More specifically, we have struggled with the myriad of implications of White researchers conducting research with racially, culturally, and linguistically diverse groups in terms of the conceptual framework adopted, the instrument selected, how the data are interpreted, and how the results or findings are used. We can not see how so many social scientists could sincerely believe that research on race, culture, and class was (or even is) free of politics, social policy, and legal mandates. And we do not buy into the notion that research on CLD populations can be conducted without some degree, even minute, of personal and professional bias.

In this article, we share concerns and considerations for researchers conducting cross-cultural research in gifted education. We assert that researchers (and this includes teachers) must be ever mindful of the need to consider their humanness – their beliefs, assumptions, attitudes, values, paradigms – and the limitations of their humanness when working with CLD participants. Several assumptions guide this paper and must be noted. First, we are products of our environment. Second, research is influenced by the life experiences, values and personal biographies of researchers. Thus, we cannot disconnect our personal and professional beliefs from our lives and lived experiences. Third, how researchers interpret their experiences and work is the result of many complex factors mediated by such variables as race, gender, language, political affiliation, religion, region, age, and/or sexual orientation. Thus, the social and cultural lenses that we use to see the “other” is influenced by who we are as individuals. Finally, all research is culture bound. Thus, it is not possible to conduct research where circumstances, demographics, and context can be ignored, minimized, negated, or in any way trivialized. These propositions are discussed in more detail below.

### **No Epistemology is Context Free**

All knowledge is relative to the context in which it is generated (Gordon, Miller & Rollick, 1990). When professionals construct knowledge, they are influenced by the ideas, assumptions and norms of the cultures and sub-societies in which they are socialized (Banks & Banks, 1995, p. 15). From the research focus, to the research questions, to the research design and

methodology, to the theoretical orientation, and to data interpretation, research is riddled with subjectivity. Researchers come to their work with beliefs and attitudes that affect their work.

Scheurich and Young (1997) observed that the major influential writers, philosophers, social scientists and educational leaders (e.g., Dewey, Kant, Descartes, Weber, etc.) have all been White – and it is they who have developed the ontological and axiological categories or concepts like individuality, truth, education, free enterprise and good conduct that we use to think about socialized and educated children. This racially exclusive group has also developed the epistemologies that we use. Essentially, White scholars, most of them males have defined the standards used to judge what is normal. Deviations from these norms are considered substandard in some way. Scheurich and Young (1997) refer to this as “epistemological racism” (p. 4).

### **Problem: Assumptions of Universals are Limited**

As Sue and Sue (1999) explained, science is used to describe, explain, predict and modify phenomena. A persistent problem in research relates to beliefs regarding universals. Sue and Sue (1999) further suggested that researchers often assume generality of findings when it is not warranted. This raises the question: To what extent can the findings from one population or sample be generalized to another population? How do our epistemologies impact us when conducting cross-cultural research? How do assumptions influence our work with people whose cultural or racial backgrounds differ from our own? Tucker and Herman (2002) observed that most theories and interventions for children and adolescents are based on research with mainly White, middle class samples.<sup>1</sup> This includes research in gifted education. To what extent are the remaining studies, theories and interventions appropriate for other groups, such as CLD students and families?

Several researchers also report that too few studies discuss the racial background or ethnicity of participants, resulting in a type of colorblindness where race is ignored and/or where explorations by race are viewed as trivial or not worth studying. According to Case and Smith (2000), 40% of the articles published in major clinical, counseling, and school psychology journals between 1993 and 1997 failed to report the race or ethnicity of the participants.

### **What Does this Mean for Gifted Education?**

Cross-cultural research poses both challenges and promises for

---

<sup>1</sup> Graham’s (1992) detailed examination of trends in research on African Americans published in APA journals between 1970 and 1989 revealed that “most of the subjects were White and middle class.”

researchers. Given the heavy reliance on White, middle class epistemologies as just discussed, it is essential that researchers consider seriously the impact of their experiences and beliefs on their work.

**Research Focus.** A large and disproportionate percentage of studies on racially diverse groups, such as African Americans, have a deficit or pathology orientation (see Graham, 1992; Tucker, 1994). Journal articles, book chapters, books, and monographs are full of articles/chapters on “at risk,” “disadvantaged,” and “impoverished” racially, culturally, and linguistically diverse groups. Most studies have focused on the educational and social problems of CLD students and their families, particularly those living in poverty, and virtually ignore those CLD students who are educationally and socially successful. Unfortunately, studies on intelligence and ethnicity consistently focus on the lower IQ scores of African Americans compared to Whites. Too often, the image – mistaken image – is that there are few if any high IQ and successful African American students.

**Theoretical Orientation.** Our beliefs and experiences influence the theoretical orientation we adopt in our work. For example, the senior author has devoted her professional life to studying gifted Black students because that is who she is. She grew up in poverty and, thus, focused on children who live in poverty. She is concerned about CLD students who do not test well because of both personal and professional knowledge of many intelligent racially, culturally, and linguistically diverse students who perform poorly on tests. The research interests of the authors are personal first and professional second.

**Literature Review.** One of the many dangers of being humans is the propensity to present or highlight points of views that are consistent with our own views. The work of Herrnstein and Murray (1994) comes to mind. A large body of work that opposed or refuted their views was ignored in the book. Despite the book’s length, the literature review was not comprehensive given the polemic focus. The authors focused extensively on African Americans who perform poorly on intelligence tests, ignoring those who score high and/or are identified as gifted. This is not surprising given that, “for over a century, there have been scientists obsessed with proving that minorities, poor people, foreigners, and women are innately inferior to upper-class White males” (Tucker, 1994, p. 4; also see Gould, 1995, 2001). Put another way, social scientists have furnished the ammunition with no reservations on its use (Tucker, 1994).

In reading articles in gifted education journals, we have noted four types of studies: Type 1 studies focus exclusively on White samples; Type 2 studies focus on predominantly White samples; Type 3 studies focus on more than one group of diverse participants; and Type 4 studies focus on one diverse group, with most studies focusing on African Americans rather than other racially diverse groups. In looking at these four groupings, most studies are conducted with White students (Type 1). If racially diverse students are included in the sample, this fact is seldom noted. And if diverse students (Types 2 and 3) are

included, group differences - SES, gender, level of acculturation - are seldom explored.

When researchers focus their work on CLD groups (Type 4), between-group studies outnumber within-group studies. Thus, CLD students are compared to White students on some construct or another (e.g., peer pressures or self-concepts between gifted White and diverse students are compared, beliefs about giftedness are compared between Puerto Rican students and White students, etc.). However, when the sample is racially or culturally homogeneous, little attention is given to gender or SES differences.

**Research Design and Methodology.** One of the contributions of qualitative research is the attention devoted to the impact of researcher bias. Qualitative researchers often discuss the notion of 'researcher as instrument' and the limitations of their work in the context of the biases they bring to all aspects of the study. Several strategies are utilized to avoid contaminating the data. When analyzing interview transcripts, for example, researchers conduct reliability checks using inter-rater reliability. Researchers may also ask participants to read their notes to determine if interpretations are accurate via member checking (Merriam, 2002). Researchers with a quantitative orientation must be equally vigilant and conscientious about their design and methodology.

**Instrumentation.** In gifted education, we have grappled with how to increase the representation of CLD students. We ponder why professionals continue to rely so extensively or exclusively on traditional tests – and on any test or measure that has a disparate impact. What notions about intelligence and tests affect our continued reliance on traditional tests? How do our personal beliefs and paradigms affect this decision? What literature do we rely upon to support this decision? What research do we ignore to support this decision?

**Data Analysis and Interpretation.** CLD students are poorly represented in gifted education. Most studies have concluded that CLD students are under-represented because of low test scores. Several questions come to mind: (1) If tests are one of the culprits, why do we continue to use them? (2) If traditional tests are the culprit, why don't we adopt alternative tests? (3) What are the explanations for this low performance on traditional tests? (4) If tests are not the culprit, what are other possible explanations for under-representation? In essence, when analyzing data, researchers must consider alternative explanations for findings. They must contextualize findings. And they must provide enough demographic and contextual information to assess external validity or generalizability

**Data Use and Dissemination.** Too much research on CLD groups has been pathological, deficit oriented (Gould, 1995). The work on intelligence, as already stated, is a key example (see Ford, 2004). The nature-nurture stalemate and attendant assumptions about racial and cultural inferiority, along with the perceived superiority of one group over another, have gone on ad nauseam (e.g., Herrnstein & Murray, 1994).

## **Culturally Responsive Research in Gifted Education: Considerations and Recommendations**

Racially, culturally, and linguistically responsible research is possible, as is becoming a racially, culturally, and linguistically responsive researcher. Here are some characteristics:

### **Self-Awareness and Self-Understanding**

The first step to becoming a racially, culturally, and linguistically responsive researcher is to be self-reflective. This change requires researchers to think seriously, critically, and honestly about their own views of racial diversity and racially diverse groups (Pang, 2001). Racially, culturally, and linguistically competent researchers should seek greater self-awareness and understanding regarding their biases, assumptions, and stereotypes. In this process of self-reflection and self-appraisal, researchers must ask themselves the following questions:

1. How do I feel about working with individuals/groups that are different from me? What stereotypes, biases and fears do I hold about diverse individuals/groups? How do these views affect my work, including research questions, hypotheses, literature review, instrument development or selection, data interpretation, and data use?
2. What aspects of my research skills and strategies might hinder building rapport with diverse participants and data collection procedures?
3. How are the expectations that I hold of CLD individuals/groups different from those of White individuals/groups?
4. How much time and effort am I willing to devote or have I devoted to studying and learning about CLD groups (e.g., their values, beliefs, traditions, customs, and worldviews)?
5. How much time and effort am I willing to devote to learning about alternative theories and models associated with CLD groups (e.g., their views about intelligence, giftedness, achievement, and creativity? their child rearing practices? their views about education?)
6. Am I willing to change, to adapt and add to my ways of thinking about those who are different from me?
7. When presented with data that may conflict with my current way of thinking, will I change my thinking and behavior?

### **Cultural Awareness and Understanding**

After examining the previous questions and confronting their beliefs, attitudes, and values, researchers must get in touch with their diverse participants. It is imperative that researchers reach out to CLD students and their families. In doing so, the following questions might be useful:

1. What is "race/culture" and how does it affect research, teaching and learning?
2. Where and whom can I turn to for more information and resources on CLD cultures?
3. What are the cultural beliefs, values, norms and traditions of the CLD participants represented in my sample?
4. What data collection strategies/procedures are culturally compatible and responsive with the participants in the study? (e.g., Do participants feel more comfortable with surveys or interviews? Do they prefer telephone calls or face-to-face meetings? Would participants prefer to be interviewed at their

home or a neutral site? Do males tend to respond more positively to questions rather than females?)

5. How comfortable do I feel working with CLD groups? Am I comfortable going into their homes and community to collect data?

Researchers — who fail to consider these views — may undermine the investigation in some way or another.

#### **Socially Responsive and Responsible**

Socially and culturally *responsive* researchers seek to increase multicultural or cross-cultural awareness and understanding within the larger society. The poor representation of CLD students in a gifted program, school, community, or state is not used as an excuse for inattention to cross-cultural research. Socially and culturally *responsible* researchers feel that it is their *duty*, their *responsibility* to always include CLD groups in their work.

#### **Racially, culturally, and linguistically relevant research topics**

A key characteristic of racially, culturally, and linguistically responsive research is a focus on topics that carry important implications for CLD populations. Thus, researchers focus on prevailing social injustices and their influence on diverse groups and their situation. Social injustices are explored, for example.

#### **Relationship Building with Participants**

Collecting data from CLD groups often is difficult unless one has built relationships with the participants. This means taking time to build trust and confidence in the researcher and his/her intentions. Relationship building might include visiting homes, community centers, places of worship, and attending celebrations.

#### **Respect for Participants' Primary Language**

Racially, culturally, and linguistically responsive researchers build upon the language of CLD participants. They affirm and accommodate different languages, and have personnel who can help to decrease language and communication barriers.

#### **Racially, Culturally, and Linguistically Sensitive Assessments**

Racially, culturally, and linguistically responsive research is not possible without culturally sensitive (biased-reduced) assessment. Such research recognizes that CLD students have many strengths that intelligence tests may not measure. They also use a variety of measurements to collect data, keeping bias at their forefront of their decisions

#### **Diverse Research Team**

In racially, culturally, and linguistically responsive research, the importance of having a diverse team of researchers is understood. For example, while it may be uncomfortable for us to admit, some CLD participants may feel more comfortable being interviewed by diverse researchers. CLD members can also: (a) shed valuable light on potential problems with questions being asked and the wording of questions/items; (b) inform the literature review from a cross-cultural perspective; (c) shed light on the values, beliefs, and customs of participants from diverse backgrounds; (d) offer alternative interpretations of the findings; and (e) offer culturally sensitive interventions, strategies and plans.

## **Conclusion**

Many scholars have devoted their lives to anti-racism; they have worked with much intent and effort to change ethnocentric or raced-based paradigms. However, it is worth noting that “a researcher could be adamantly anti-racist in thought and deed and still be using a research epistemology that could be judged to be racially biased” (Scheurich & Young, 1997, p. 5). Thus, we must aggressively and proactively seek to become culturally competent researchers. Our schools and society are becoming more diverse than ever before. Will we continue to conduct business as usual? Will we continue to profess that scientists are neutral, value-free professionals? Will we continue to be overly generous with generalizations or external validity and with universal assumptions? Will we continue to conduct research on White gifted students and apply the findings to racially diverse gifted students? Will we continue to apply theories of intelligence and giftedness developed by White scholars and based on White populations to diverse populations? Researchers must acquire the knowledge, skill and dispositions to become racially, culturally, and linguistically competent. The integrity of our research depends on it.

## **References**

- Banks, J. A. (2006). *Cultural diversity in American education*. Boston, MA: Allyn and Bacon.
- Banks, J. A., & Banks, C. A. M. (Eds.). (1995). *Multicultural education: Issues and perspectives*. Boston, MA: Allyn and Bacon.
- Case, L., & Smith, T.B. (2000). Ethnic representation in a sample of the literature of applied psychology. *Journal of Consulting and Clinical Psychiatry*, 68(6), 1107-1110.
- Ford, D. Y., Grantham, T. C., & Harris, J. J., III. (1998). Multicultural gifted education: A wakeup call to the profession. *Roeper Review*, 19, 72-78.
- Ford, D. Y., Grantham, T. C., & Moore, J. L., III. (2006). Essentializing identity development in the education of students of color. In H. R. Milner & E. W. Ross (Eds.), *Race, ethnicity, and education: Racial identity in education* (pp. 3-18). Westport, CT: Greenwood/Praeger.
- Ford, D. Y., & Harris, J. J., III. (1999). *Multicultural gifted education*. New York: Teachers College Press.
- Ford, D. Y., & Moore, J. L., III. (2004). The achievement gap and gifted students of color. *Understanding Our Gifted*, 16, 3-7.
- Ford, D. Y., Moore, J. L., III, & Harmon, D. A. (2005). Integrating multicultural and gifted education: A curricular framework. *Theory Into Practice*, 44, 125-137.

- Ford, D. Y., & Whiting, G. W. (2006). Underrepresentation of diverse students in gifted education: Recommendations for nondiscriminatory assessment (part 1). *Gifted Education Press Quarterly*, 20, 2-6.
- Gordon, E.W., Miller, F., & Rollock, D. (1990.). Coping with communicentric bias in knowledge production in the social sciences. *Educational Researcher*, 19(3), 14-19.
- Gould, S. J. (1981). *The mismeasure of man*. New York: Norton.
- Gould, S. J. (1995). *The mismeasure of man* (revised ed.). New York: Norton.
- Graham, S. 1992. "Most of the subjects were White and middle class": Trends in published research on African Americans in selected APA journals, 1970-1989. *American Psychologist*, 47, 629-639.
- Herrnstein, R. J., & Murray, C. (1994). *The Bell Curve: Intelligence and class structure in American life*. New York: Free Press.
- Merriam, S. B. (2002). Assessing and evaluating qualitative research. In S. B. Merriam & Associates, *Qualitative research in practice: Example for discussion and analysis* (pp. 18-33). San Francisco, CA: Jossey-Bass.
- Moore, J. L., III. (2006). A qualitative investigation of African American males' career trajectory in engineering: Implications for teachers, counselors, and parents. *Teachers College Record*, 108, 246-266.
- Moore, J. L., III, Ford, D. Y., & Milner, H. R. (2005a). Recruitment is not enough: Retaining African-American students in gifted education. *Gifted Child Quarterly*, 49, 51-67.
- Moore, J. L., III, Ford, D. Y., & Milner, H. R. (2005b). Underachievement among gifted students of color: Implications for educators. *Theory Into Practice*, 44, 167-177.
- Pang, V.O. (2001). *Multicultural education: A caring-centered, reflective approach*. Columbus, OH: McGraw-Hill.
- Scheurich, J. J., & Young, M. D. (1997). Coloring epistemologies: Are our research epistemologies racially based? *Educational Researcher*, 26, 4-16.
- Stanfield, J. H. (1985). The ethnocentric basis of social science knowledge production. *Review of Research in Education*, 12, 387-415.
- Sue, D. W., & Sue, D. (1999). *Counseling the culturally different* (3rd ed.). New York: John Wiley.
- Thomas, A., & Sillen, S. (1972). *Racism and psychiatry*. New York: Brunner-Routledge.
- Tucker, W. H. (1994). *The science and politics of racial research*. Champaign: University of Illinois Press.
- Tucker, C. M., & Herman, K. C. (2002). Using culturally sensitive theories and research to meet the academic needs of low-income African American children. *American Psychologist*, 57, 762-773.

## **Biology Striking a Chord with U.S. High School Students**

**Joann P. DiGennaro President**

**Center for Excellence in Education (CEE) McLean, Virginia**

History has been made yet again by Team USA at the 18<sup>th</sup> annual International Biology Olympiad (IBO), held this summer at the University of Saskatchewan in Saskatoon, Canada. The four-member Team USA was each awarded a gold medal and was named "Number One Team in the World" by outperforming 48 nations, just edging out China in the combined scores of theoretical and laboratory skills examination.

Remarkable is a word that most definitely comes to mind when examining the feats of Team USA. Theoretical and laboratory experiences in U.S. high schools have significantly declined. Lack of sufficient funding, obsolete facilities and lack of trained teachers are cited as major reasons.

From its inaugural in 2002, the USA Biology Olympiad (USABO), sponsored by the Center for Excellence in Education (CEE), has demonstrated that advanced training for top performing students, along with a careful selection process for U.S. finalists, can lead this nation's students through an incredible journey of discovery and success. In the Center's five years of sponsoring the USABO, every U.S. team member has medaled in the annual International Biology Olympiad (IBO), the international competition for top high school students. In total, the U.S. has garnered an impressive 12 Gold, 6 Silver and 2 Bronze medals. The achievements of these scholars have brought international recognition for U.S. efforts to continue its scientific leadership in an increasingly competitive world.

The USABO comports with CEE's mission of "encouraging young scholars to careers of excellence and leadership in science and technology." Twenty high school students from across the country were invited to attend the USA Biology Olympiad National Finals.

Students were selected from almost 9,000 registered students after a series of exam-based competitions. During the National Finals, which brings 20 of the best and brightest biology students across the nation to spend 2 weeks studying with distinguished biology professors and immersing themselves in a university laboratory, 4 are selected to represent the nation at the IBO. Professors at the National Finals strive to design laboratory experiments, which enhance the USABO scholars' knowledge of theory and challenge assumptions.

Testing at the IBO is equally distributed between a theoretical and laboratory examination. Historically, Team USA has excelled at the theoretical exam, but found the practical exam more challenging. However, the average laboratory score for Team USA in 2007 increased significantly from 2006. This improvement can be directly traced to recognition by USABO faculty for the need to develop lab skills by increasing attention to hands on experimentation in U.S. training. In fact, U.S. student, Meng Xiao He, garnered the highest laboratory score in the world!

Many factors contribute to the poor laboratory skills among U.S. students. Most notably, the rising costs of equipment and specimens combined with increased liability costs have made it prohibitively expensive for many schools to provide advanced laboratory experiences. This is combined with inadequate teacher training and insufficient school time given to students for hands-on laboratory experiences. Remarkably, for many of the USABO students, the National Finals marks the first time that they have been given the opportunity to work in depth with sophisticated equipment generally unavailable in a typical high school.

Team USA demonstrates that students who exhibit a genuine interest for learning will persevere and "show their stuff" among the world's finest young scholars. Given the proper instruction and education, U.S. scholars can continue to prevail in innovation, to remain globally competitive and to lead this nation into the future.

**What Young Teachers of the Gifted Need to Know and Do**  
**Sanford Aranoff, Ph.D. Professor of Physics and Mathematics**  
**Rider University Lawrenceville, New Jersey**

**I. Introduction**

Dear reader, please allow me to share some thoughts with you to help you with this very important task. You must realize that you have a very important responsibility. Education is the only way to change people. This has been verified in the millennia of human existence. Education means communication, which is talking and listening. You are dedicating your life to changing people for the better. This realization will give you the courage, stamina, enthusiasm, and satisfaction from your teaching.

The focus of this paper is on gifted children. These people will be at the forefront of society in the future. Our society has very serious problems that will need the very best efforts to solve. Failures will cause serious hardships. The type of world our students will inherit may be so different from today's world that we cannot imagine. We will need the best creative and analytical abilities in our future leaders to manage this world. Our job as teachers is to help our future leaders to be properly effective in the new, strange, and challenging world.

Exciting, isn't it? Your responsibility as a teacher of gifted children is awesome! Let us work together, trying to think clearly on the best way to carry out this responsibility. Before I start with my suggestions concerning how to teach, please allow me to discuss some problems facing our society, which I have personally seen, problems that appear to be the result of poor teaching in high school.

**II. Problems**

When I finished my doctorate, and began teaching at Rutgers, I took a summer position at Bell Laboratories working on an anti-missile project. The idea was to build a defense against enemy missiles. I was offered a full time position at double my

university salary, but turned it down. I disliked intensely the work atmosphere. People were not focused on trying to understand the problems involved and how to solve them; instead, they would talk only about their social lives. Management also did not understand how to focus on a problem. They would frequently stop work on a project in the middle of the project, and move to something else. I realized that nothing could get accomplished this way.

To this day, we do not have an anti-missile defense. We may have to go to war against Iran to take out the nuclear missiles, as we cannot live with this danger.

The reason is that we do not know how to work on government defense programs. We do not see the work as challenging problems to be solved. We do not see the work as extensions of our math and science training. The danger we are currently in, that we do not have defense against missiles, can be traced to our poor education practices.

In 1993, I was a software developer for Grumman on the JSTARS project. This is a radar surveillance system, and used in the first Iraqi war. When I started working, I noticed that the program contained errors in high school trigonometry. I asked my manager how this code could have passed inspection. He replied that the government inspectors were paid for inspecting, and wanted to continue issuing favorable reports in order to guarantee a job coming back.

Why are we not using JSTARS to monitor the borders in Iraq, to prevent infiltration from Syria or Iran? Why are we not using JSTARS to help monitor traffic in our cities? The answer is because of errors similar to the high school trigonometry error

discussed above! If we cannot get our high schools to do the job correctly, we will not be able to build defenses necessary for the security and future of our country!

Recently there was a news item about soldiers suing the government for illnesses caused by depleted uranium. The complaint is that they were not informed of the dangers. Wait a minute! High school students know (or should know) of the dangers of lead. Uranium is chemically similar to lead, and so one does not want to get any uranium inside the body. Furthermore, uranium radiates alpha particles with a half-life about the same as the age of the earth.

If our soldiers are so uninformed that they do not know these things, I am concerned that there are other things in this age of technology that they do not know, which they should know, that will hurt them on the battlefield and impair our ability to fight! Whose fault is this? Our fault, as educators!

A friend was telling me how they can save energy and so reduce global warming. He visited a place where they pumped water to a reservoir on top of a hill. By day, the water fell down and created electricity. Most of the electricity was sent to the grid for public use, with part of it saved to pump the water back up at night.

I vainly tried to explain that this cannot be, due to conservation of energy, and that the only purpose of the reservoir was to even out power generation between high and low demands. Whose fault is it that an intelligent responsible citizen does not know elementary things like conservation of energy? How can such people vote and make rational decisions for our future? It is our fault, as educators!

A recent item about *Consumer Reports* testing automobile collisions mentioned an error caused by a faulty calculation of momentum in collisions. High school students learn how to make these calculations. They were testing colliding one car into another, without properly understanding the basic physics! Sadly, there are very many stories like these!

### III. The Future

What will the future of our high school students be like? Can we imagine it? Consider the Internet, for example. The Internet has radically changed society. What is strange is that if we read science fiction from the days before the Internet, we will not find any hint of the Internet. Science fiction writers are people who stretch their imagination to reach wild extremes, yet were unable to even dream of the Internet! This means that the future may be so different from today that we are unable to guess what will be. It means that we have to train our gifted students to learn how to think correctly in order to best deal with the world.

We have failed in the past. We have not educated our students in knowing how to do technical work in an industry setting so that they can build defenses like anti-missiles or JSTARS, and consequently, our country is in grave danger. The future may be even scarier. Our responsibilities as educators are serious!

Here is a thought of a possible future:

In 30 years, computers will be smarter than people. Will we say they are alive, as they will be built out of DNA, and grow by neural training? We may be able to create such "living" entities that will live forever, for when parts wear out, they are replaced, but the memory is intact. These "beings" will be networked together via the Internet. The science fiction android is not an independent entity, but part of the monolith. Will they be like angels from Heaven, very intelligent, can do no evil, fully interconnected with other angels? There is no way we can kill this monolith, as each part is connected to each other, and we cannot kill the entire system. We will have created a new life form that we will not be able to destroy. We must at least be aware of what we are doing, and the possible dangers, before it is too late. Maybe life exists elsewhere in the universe, in the form of such monoliths.

There is a lot more one can say on this topic, e.g., brain implants, all interconnected via the Internet. Will computers be able to control large numbers of people via the implants? What about warfare, where an enemy would easily fry all electronics in a city? How will our students deal with these situations when they become adults? We do not know the answers. We can only help them learn how to think, so that they can get information and rationally analyze options. What we want to do is to help our students to learn how to think.

Science helps humanity. Science teaches us how to be a master over nature. We can change things, and make them better. Yes, things can and do go wrong, with the result that scientific progress is harmful. The goal is to study and understand how to avoid the dangers, and to make things better. We must teach our belief of science and progress, and try to avoid defeatism, which has turned many away from science. The scary thoughts about the future, along with bad experiences from the past, make it imperative that we try to push for an understanding of the world using science and mathematics, to help prevent bad things and to increase opportunities for good things.

### IV. How to Teach

Here are some brief ideas on how to teach, especially gifted children: **We must understand the material we are teaching.** We have to have an open and questioning mind. In particular, we have to understand the foundations, the basis, of mathematics and science.

Here briefly is what I feel the foundations are: *Mathematics is logic, based upon arbitrary assumptions, with the sole requirement of consistency.* Students frequently do not understand what the word arbitrary means. It means that we can say anything we want, as long as we are making sense and do not contradict ourselves. Isn't it fun to say anything you want? Math is fun!

Some teachers simply instruct the students on how to do the math problems, without giving them the basic understanding. If they do the work, the teachers are happy. Sorry to disagree! Students must understand that math is logic!

*Science* is noting the agreement of the chosen mathematics with experiment and observation. The books that I have seen are not careful with this distinction, and this hurts students. We build our logical systems, and then examine the world to see how much our logic agrees with the world. Science is then selected mathematical systems along with reports of observations and experiments.

We have to understand this ourselves. When we teach, we have to start with these explanations.

*We have to start from the beginning.* For example, if we discuss quadratic equations, we must first ask the class what equations are. (Answer: Something that contains an equal sign.) We then explain the word quadratic. In every discussion, we have to make sure that the beginnings are fully clarified. I have noticed when attending seminars for mathematicians or scientists, the beginnings of seminars are usually full of questions. People focus on the beginnings of what is being discussed. We teachers must also make sure that the beginnings are clear.

You have to think about the subject before class, and ask yourself if the material makes logical sense. If it does not make sense, you can be sure that a gifted student will ask you. At least try to anticipate the questions! Okay, you are prepared. You understand the material. How do you conduct yourself in class explaining things?

While talking, watch their faces carefully. If you see any signs of puzzlement or disinterest, then stop and ask them what they are not sure about. You have to give attention to your students, and treat them with respect. You have to find out just what they understand and what they do not understand.

- Everything you say must be followed by an example.
- Try to present the same idea in different ways.
- Your goal must be their improved understanding of the concepts.

Look at their written work, both homework and on the board. Insist that the work be neat; there be no ambiguity in symbols such as between small L and 1. If they make too many mistakes, cross out the work with a single diagonal line. Insist that all math work be done with only one step at a time. This may require much more paper. Finally, I personally never write on the other side of a sheet, as this way I can look at two sheets at the same time.

Finally, be happy and optimistic, and try to keep the students happy. We learn the best when we are relaxed and happy. This is similar to the need to be relaxed while eating. Both the stomach and the brain function best when we are relaxed. This means we can be playful with the ideas.

**What are the teacher's goals?** It is not to explain to the students all the material that they are expected to cover, for this is impossible. It is not possible to cover properly in class all the material that they will be tested on. Instead, the goals are to teach them how to:

- study
- think about mathematics
- enjoy the subject and to be creative in their approaches
- learn to read word problems
- work together
- know how to properly check their work
- work neatly
- take tests.

Once they have the proper background and know what to do, they will be able to cover on their own the material that the teacher had to rush over or skip altogether. The classroom environment can be designed to meet these goals. When examining their work, the teacher should note if the work is neat or not. Ask them how they checked, and how do they know the answer is right. Discuss the homework with the entire class. "John did a good job by quickly checking the work by doing..." When they say something creative, praise them, tell them they must continue.

An example lesson in mathematics is that the teacher explains the concept of *x-intercept*. This is the point where a line intercepts the *x*-axis. The next thing explained is *y-intercept*. Rather than explaining these two ideas in sequence, the teacher can explain the first, clearly drawing a diagram. Then she can ask the students, does every line have an *x-intercept*? The answer is clearly no, for horizontal lines have either 0 or an infinite number of *x* intercepts (if the line is the *x*-axis).

Next, the teacher can ask what the students can generalize. Let a student suggest the idea of the *y-intercept*. This way the student not only learns the concept, but also learns how to think and approach mathematics. This self-thinking is critical if the student is to be able to review all the required material, including material not covered in class. This approach, furthermore, helps clarify and impress the ideas, and will help them do problems.

**Behavior of the Gifted Student.** An excellent student, well behaved, gets along with everyone else, eager and enthusiastic. All that you have to do as a teacher is to properly explain the material. Sure! You wish! How about this scenario: The student comes into the math class, sits on a swivel chair in the back, and starts spinning around. Other students talk loudly, and are not interested in you, the teacher.

The students want to play. Play with them for a minute or so, turning the play around to an educational topic. For example, with the student spinning on the chair, I told him to stretch his arms out, and I would spin him. Then he should bring his arms in. He would notice that the spinning increased. This is due to conservation of angular momentum. After that, the students sat down and eagerly participated in the lesson.

### V. Help

The intelligent person reaches out for help from any source possible. High school teachers can benefit by getting university professors to help them. There is an unfortunate schism between high schools and universities. If the teacher approaches the professor with an open questioning mind, asking the professor for help in understanding an idea, the professor will respond favorably. The questions can be done in person or via email. It may help to go to university seminars occasionally, and socialize during the pre-seminar teas. Professors are interested in logic

and ideas, and if you can discuss matters of logic and ideas, you may find a very receptive and helpful response.

Once a teacher is aware that a student is gifted, it would be best to confer with others how to best conduct the class. This is a challenge for the teacher, and the teacher should try to get help and advice from others.

## **VI. A Personal Experience**

Here is a personal experience I had with a gifted student. I will call him John, which is not his real name.

I have known John for the past several years, and am very impressed. Last week I was teaching a practical math class. To my surprise, I saw John there. I sat next to him and started talking. I asked him what he was doing there. He said that he failed a math course, and so was required to take this course. I asked him why he failed. He said he was bored. I discussed boredom with him. I told him that if he knew what was going on, he should quietly do something else. It does no good to pay attention if he already knows what is being discussed. He should occasionally listen up for there may be a new idea being discussed. I told him that I understand how he feels, as I was a gifted child in school also. I feel happy that I was able to talk to John, and help set him on the right track. Losing a brilliant mind like John would be a serious loss for society.

Teachers need to be alert to students who are very superior, and to treat them differently. It is sad that John's teachers last year did not see his potential and permitted him to fail. Parents of gifted children need to inform teachers so that the teacher can do what can be done.

Again, just as the intellectually challenged students need special treatment, the intellectually superior student needs special treatment. Well, I told John that he should do today's assignment, which will be easy and quick for him, and then go to something else.

## **VII. Literature on Teaching Gifted Children**

There is a lot of material available on this subject. The writing is voluminous. The teacher needs to absorb and remember a few key ideas. It is not possible to teach, think of the scientific ideas, watch the students, and simultaneously keep in mind the vast things written on the subject. You have to look at these writings, take notes that will summarize the ideas, and then focus on the summaries.

This is similar to the way students learn. A chapter in a geometry book will have many pages, explaining the ideas and giving examples. However, there are only two or three key ideas, set in colored frames, which the students must know. I tell students that after they went over the material, checking that they understood the ideas, they must go over the chapter, looking only at these few key ideas, and focusing their attention on these ideas. Teachers must do the same when reading the literature on education.

For example:

[http://www.prufrock.com/client/client\\_pages/new\\_teachers.cfm](http://www.prufrock.com/client/client_pages/new_teachers.cfm)

This article originally appeared in *Gifted Child Today*, 28(1), 22–23. Winter 2005.

### **A Message to New Teachers of Gifted Children (Prufrock Press) – Excerpts**

**By James R. Delisle, Ph.D.**

“Some of your school's highest achievers are not gifted, and some of the most gifted children you will meet are not high achievers. . . .”

“All children in your school need an advocate—someone who believes in the irrefutable sanctity of their simply being individuals. For many students, your advocacy is easy: rewards for good work and behavior and an occasional ‘How's it goin'?’ in the hall. But, some of your gifted students will need something deeper and more personal. They will need you to believe in them when they, and others, don't. . . .”

“ . . . Caress this child emotionally; let him or her know that grades are a small and often insignificant measure of success. If your gifted students are caring, giving, introspective, and committed to relevant learning, they are more successful than are the straight-A students who possess none of these attributes. Yes, your advocacy efforts will also involve speaking to parents, educators, and community members about the needs of gifted children, but the front line of advocacy is that boy or girl in front of you who wants to be acknowledged and accepted as a human being, not just a ‘smart kid.’ ”

“ . . . When times get tough, politics get dense, budgets get cut, and criticism piles high, you have one place to turn that will always renew your spirit: the gifted children you teach. They look to you for wisdom and guidance; you need to look to them for support. If you get the privilege to know gifted kids who continue to connect with you long after they leave your classroom, then you will truly know what it means to be a teacher.”

Try to summarize this in one or two sentences. *Believe in your students, and accept them as people.* How is this a one sentence summary?

Here is another:

[http://www.austega.com/gifted/articles/Rogers\\_researchsynthesis.htm](http://www.austega.com/gifted/articles/Rogers_researchsynthesis.htm)

### **Research on Instructional Delivery: Projects, Independent Study, Hands On (from Dr. Karen Rogers Updates, 1999)**

Gifted students demonstrate the following at a statistically significant level when compared to normal students: (1) Preference for self-structured tasks and self-imposed deadlines; (2) Preference for working on projects alone or with one like

ability peer; (3) Preference for self-instructional tasks (programmed instruction), games or simulations; (4) Greatest preference for independent study projects that are reading/content acquisition-based; and (5) Greater interest in learning "something new and different," rather than doing hands on things.

**Research on Instructional Delivery: Pacing, Process Modifications (from Dr. Karen Rogers Updates, 1999)**

(1) The learning rate of children above 130 IQ is approximately 8 times faster than for children below 70 IQ; (2) Gifted students are significantly more likely to retain science and mathematics content accurately when taught 2-3 times faster than "normal" class pace; (3) Gifted students are significantly more likely to forget or mislearn science and mathematics content when they must drill and review it more than 2-3 times; and (4) Gifted students are decontextualists in their processing, rather than constructivists; therefore, it is difficult to reconstruct "how" they came to an answer.

**Effective Teachers of the Gifted (from Dr. Karen Rogers Updates, 1999)**

Based on questionnaire data and needing more thorough re-

search, effective teachers of the gifted have the following characteristics: (1) High degree of intelligence, intellectual honesty; (2) Expertise in a specific intellectual or talent area (mathematics, writing, etc.); (3) Self-directed in own learning, with a love for new, advanced knowledge; (4) Equanimity, level-headedness, emotional stability; (5) A genuine interest in, liking of gifted learners; (6) Recognition of the importance of intellectual development; (7) Strong belief in individual differences and individualization; and (8) Highly developed teaching skill and knowledge.

Student responses suggest effective teachers of the gifted need to: (1) Be patient; (2) Have a sense of humor; (3) Move quickly through material; (4) Treat each student as an individual; (5) Avoid being a "sage on the stage" all the time; and (6) Consistently give "accurate" feedback.

---

Homework for you, the teacher. Summarize these in one or two sentences. If you cannot, it means you do not get the point. Now you know how students feel when assigned homework! You thought you were just going to sit back, relax and read. No! You have to work!

**NCLB Implications of Identifying and Teaching Gifted Students**

**Stephanie Giese**

**Teacher of the Gifted Hillsborough County Public Schools Tampa, Florida**

No Child Left Behind (NCLB) is a controversial piece of legislation that has left many educators with questions that seem difficult to answer since the law was passed in 2001. Particularly in the field of gifted education, questions often seem to be piling up, and for educators one question stands out among the rest. How does this law affect our teaching? Especially for teachers of gifted students, it may present a challenge, but there are many things that we can do within our own classrooms to benefit those children.

In order to understand how NCLB applies to gifted education, one must first examine the legislation as it applies to the general classroom setting. This can be a difficult task in itself because the application varies from state to state. Throughout the country all states must place highly qualified individuals in the classroom, and all states must make adequate yearly progress towards having all of their students working on the proficient level. However, each state determines for itself what its definition is for "proficient" students.

This puts most schools in a position where they need to focus their resources on low-performing students in order to make adequate yearly progress (AYP). In an interview published on the web site for the National Association for Gifted Children, Jane Clarenbach, who is the NAGC Director of Public Education and Affiliate Relations, stated: "... The punitive nature of the

law forces local school leaders all too often to make resource choices to address the needs of one group of students—those performing below 'proficient' on a statewide test—at the expense of students already performing at the proficient level. NCLB does not provide incentives or rewards for districts doing a great job of working with above-proficient learners. . . ."

For gifted education, no state has a federally funded program in place within the public school system as compared to special education. But it is important to recognize that despite a lack of extensive federal funding, many states do offer gifted and talented classes or enrichment opportunities for gifted students which are funded locally or through state grants or limited federal (Javits) grants. For those states that do serve academically gifted students, the program qualifications vary. Because there is not a national program in place for gifted education, there are many discrepancies from state to state.

In Florida, a state with mandated gifted education programs, students are recommended for screening by either their teachers or their parents. They are screened using a standardized intelligence test. If they score high enough on the screening test, they are recommended for further testing by a qualified psychologist. It is a rigorous, but unique process in that Florida recognizes the achievement gap and provides a criterion for lower test scores from students with lower economic status (as

well as those with limited English proficiency) through what is referred to as “Plan B.”

Students in the general population are required to score two standard deviations above the mean on the IQ test in order to qualify for the gifted program, while those who are receiving services for limited English proficiency or receiving free or reduced lunch need only to score one standard deviation above the mean on the test. Although there have been discussions recently about all students having to meet the same criteria, students in Hillsborough County Public Schools currently under “Plan A” must have an IQ of 130 or higher, while students under “Plan B” must score at least a 115 on the test. (Not all school districts in Florida currently have a “Plan B.”)

This practice is supported by the research of Hart and Risley (1995), who said that, “[t]he average IQ among the professional children was 117, and the welfare children had an average IQ of 79.” Possible reasons for such a significant gap include fewer language barriers, more travel opportunities, and more resources within the home for children with higher socio-economic status. Naturally, states with mandated programs for gifted education require the IQ scores of eligible students to be significantly higher than those of average children; but, as we see in Florida, states are starting to make allowances for the very gap that NCLB was designed to close.

I asked Dr. Lauri Kirsch, the current gifted supervisor for Hillsborough County schools for her reaction to how No Child Left Behind relates to gifted education. She replied:

“In 2002, an article published in the Roeper Review warned of the implications of state standardized testing programs on the attitudes and motivation of gifted students (Moon, Brighton & Callahan, 2002). In 2005, district FCAT [Florida Comprehensive Assessment Test] data suggested that gifted and high ability students showed the least gains, especially in the area of reading. District personnel in the Curriculum & Instruction Division have, with increasing frequency, begun to examine the curriculum content and strategies available to motivate and empower gifted and high ability students to greater achievement. Many elementary principals are open to ideas from the National Research Center on the Gifted and Talented, such as the School-wide Enrichment Model-Reading (SEM-R) Framework, Project M3, and RenzulliLearning.com.

“Change begins with noticing there is a need, with identifying the gap between what is and what should be, and follows with identifying ways to bridge the gap. I am optimistic that the right people are asking the important questions and examining options that will lead to positive change in the education system that will positively impact gifted students.”

So what changes can teachers make to have the positive impact to which Dr. Kirsch was referring? There are literally millions of enrichment opportunities for gifted children that can either be sought out or brought into the regular classroom. There are, of course, the tried and true activities such as field trips or research reports, but it is very important for educators to be sure that we are offering enrichment, particularly to our gifted students.

Even before NCLB, Susan Winebrenner addressed the issue in her book *Teaching Gifted Kids in the Regular Classroom* (Revised and Updated Edition, 2001). She wrote: “With so much attention aimed at students with learning difficulties, much less attention has been paid to students who have already demonstrated mastery. The attitude among some teachers has been not to worry about high-achieving students at all and spend the bulk of their time with ‘the kids who really need me.’ For many gifted students, being in a heterogeneous classroom has been an excruciating experience” (p. 175).

The good news is that No Child Left Behind grants teachers and administrators the freedom to choose appropriate enrichment materials specific to the needs of their gifted students. Along with that freedom comes the responsibility to foot the bill for gifted programs. Luckily, there is an abundance of resources available for creating such programs for those who are willing to put in the extra time and effort.

### **Gifted Program Options**

Teachers can invite guest speakers into the classroom, take students on enrichment trips, or write grants to bring extra resources into the classroom for the benefit of gifted students. Joyce Benninger, a gifted teacher in Tampa, collected old building blocks, batteries, and miscellaneous supplies and turned her classroom’s work closet into a robotics lab where students could work after their classroom tasks had been completed. Many schools around the country have invested in Spectrum Science labs. My third, fourth, and fifth grade students have the opportunity every five weeks to spend five days in the lab doing cooperative learning experiments that are directly related to Florida’s Sunshine State standards. The PTA at Mary Bryant Elementary School donated the money for the lab and every third through fifth grade class uses the science lab on a rotating basis. However, the gifted students are given their own time slot. We are just one of many schools in Hillsborough County with our own science lab.

In addition to labs, there are many people and organizations willing to present workshops to students. Our school has monthly presentations for the fourth grade students from the Museum of Science and Industry. Students are engaged in hands-on activities such as making rockets which enable them to learn about various science topics in our curriculum. We also have the luxury as teachers of having a list of organizations that will send presenters out to a school free-of-charge. Earlier in the year a forest ranger came into our classroom with two snakes and a turtle as part of our unit on living things. One of the wonderful things about our local education system is that teachers and school systems that do not have these luxuries can write grants to receive the funding needed to start such programs.

One thing that any school can do with or without significant funding is to hold monthly family nights. Each month focus on a different content area. Over 100 families turned out for our school’s recent math night. Teachers demonstrated hands-on math activities and designed math projects with their students and parents. The gifted students had their own designated area

of the school and were engaged in higher-level projects and activities, such as *Hands on Equations* (Borenson and Associates).

The benefit of guest speakers, labs, and family nights is that, while there can be a focus on gifted children, these activities can benefit all students, not only those identified as gifted. Charlotte Hayman, former Supervisor of Gifted and Talented Education for Wicomico County Public Schools in Maryland told me, "It is important to remember that there are many faces of giftedness. The child who is gifted intellectually is often easy to recognize. Our challenge is to be ever watchful for the child whose giftedness is not so easily identified."

### **Conclusion**

Educators are creative and resourceful people both by nature and by necessity. The fact that gifted students are not specifically addressed by No Child Left Behind is just one issue among many that will need to be addressed within our individual school systems and classrooms. Long before this law was passed, teachers were working to address the needs of all students in their classrooms and they will continue to do so even when the current legislation neglects one particular group. Our gifted students are destined to be successful and it is our responsibility to serve them to the best of our ability now, while their minds are malleable. Teachers and administrators have the best interest

of these students at heart and will work to give each child the best possible instruction in the most appropriate environment.

### **References**

Hart, B., & Risley, T. R. (1995). **Meaningful Differences in the Everyday Experiences of Young American Children**. Baltimore: Paul H. Brooks.

Interview with Jane Clarenbach, NAGC's Director of Public Education & Affiliate Relations. **More Questions than Answers: No Child Left Behind**. <http://www.nagc.org/index.aspx?id=1256>. Retrieved October 16, 2007.

Moon, T. R., Brighton, C. M., & Callahan, C. M. (2002). State standardized testing programs: Friend or foe of gifted education? *Roeper Review*, 25, 49-60.

Tough, P. (2006). What it takes to make a student. *The New York Times*. November 26.

Winebrenner, S. (2001). **Teaching Gifted Kids in the Regular Classroom: Strategies and Techniques Every Teacher Can Use to Meet the Academic Needs of the Gifted and Talented** (Revised and Updated Edition). p. 175. Minneapolis: Free Spirit Publishing.

## **Alistair Cooke's Memorable Account of America during the Second World War**

**Michael E. Walters**

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

In conjunction with Ken Burns' documentary film on the Second World War, gifted students should read Alistair Cooke's nonfiction account entitled, **The American Home Front, 1941-42** (2006, Atlantic Monthly Press). Burns' film is concerned with the heroic behavior and dedication of the American soldiers, while Cooke's narrative conveys the significance of the home front, which consisted of the technology, craftsmanship, industrial might, and agricultural endeavors of the American people. Cooke, a leading print and television journalist of the 20<sup>th</sup> century, was born an Englishman and later became an American citizen. He was originally educated at Cambridge in England and also at Harvard and Yale universities. During his American education period, he married a descendant of Ralph Waldo Emerson. In the early days of television, he became the host and narrator for the cultural show, *Omnibus* (1952-61), which highlighted the talents of American creative geniuses such as Leonard Bernstein, James Agee, William Saroyan and Helen Hayes. He is best known for being the host of *Masterpiece Theatre* on PBS for 22 seasons (1971 to 1992). Among the dramatic "gems" he hosted were *Upstairs, Downstairs* and *I, Claudius*.

This book was originally written as a travelogue for the British Broadcasting Corporation (BBC), and was based upon Cooke's automobile, train, bus and airplane excursion throughout the United States. Gifted students will benefit from many of the observations presented in **The American Home Front**. First of all, it is an example of expository writing at its best. He wrote passionately and poetically about the beautiful landscape in various regions and the American people, while also making brilliant, detached observations of industrial and cultural developments that were beginning to come to the forefront.

He believed in the American people despite their social flaws. Cooke faced the racial divide, religious prejudices (e.g., anti-Semitism), fears of Japanese Americans that resulted in their internment, and the gap between various economic groups (e.g., country clubbers, tenant farmers and industrial workers). Cooke realized that despite these social anomalies, the United States was an important work in progress. This period was the beginning of the modern civil rights movements, since Black Americans were demanding equity in industrial plants and the armed services.

Cooke had an uncanny comprehension of the innovative power of America's technology. For example, his statement concerning how oranges were significant to the war effort illustrates this. They became important because of their pectin which helped to heal deep wounds.

He also showed how the farmers of Wisconsin were very innovative in their dairy manufacturing procedures. Their dry milk and cheese products helped to sustain not only our armed forces but also our ally, Great Britain.

His discussions of individuals such as Henry J. Kaiser and Dave Beck were revealing to future postwar developments. Kaiser was the first of the conglomerate moguls. He built dams, highways, Liberty cargo ships, cars, aluminum processing plants, invested in real estate, and developed health maintenance programs. Dave Beck created a union town in Seattle, Washington through his Teamsters organization. Later in the 1960s, he was indicted and incarcerated by the federal government for corruption. Cooke, although a New York City resident, foresaw the economic, political and cultural rise of California, Florida and Texas. By reading this book, gifted students can also see the significant changes which occurred in the United States from an industrial power of the 1940s to today's financial and communication giant.

It would be important for them to contrast **The American Home Front** with de Tocqueville's **Democracy in America** (1835, 1840). Educators of the gifted need to understand that Cooke was able to do this type of writing because he had a thorough humanities education. His manuscript was almost discarded, but a few weeks before his death, his personal secretary discovered it while browsing through a closet. What a wonderful legacy that was preserved!

### ***Books from Gifted Education Press***

#### **Quotations for Creative Insights and Inspiration: A Quotations Based Differentiated Humanities Curriculum for Gifted Students and Their Teachers in Middle and High School** (ISBN 0-910609-29-2)

Ross Butchart Vancouver, British Columbia COST: \$17.60 including P & H.

#### **Coercive Egalitarianism: A Study of Discrimination Against Gifted Children** (ISBN 0-910609-25-X)

Stephen Schroeder-Davis Elk River, Minnesota School District COST: \$14.30 including P & H.

#### **Using the Internet: American History Projects for the Gifted Classroom, Grades 4 - 8 From Exploration to Revolution** (ISBN 0-910609-53-5)

Janis Purnell Gifted Education Instructor Littlestown, Pennsylvania COST: \$19.80 including P&H.

"If I were a history teacher or teacher of the gifted, Purnell's book would be an invaluable resource for differentiated instruction."  
Eugenia M. Fisher, Ed.D. Reading Education Consultant

This book emphasizes the integration of traditional print media with Internet resources. It contains hundreds of Web Links that teachers and students can use to study various aspects of American history.

#### **SNIBBLES: REALLY Creative Problem Solving Lessons and Mind-Stimulating Exercises for Gifted Students and Their Teachers, Ages 5 through Really Old!** (ISBN 0-910609-50-0)

Judy Micheletti Teacher of Gifted Students Berwick, Pennsylvania COST: \$19.80 including P&H.

"Judy's creativity will delight and push you and your students to *wonder or think outside of the box!*"

Franny McAleer Professor Indiana University of Pennsylvania

Send Your Check or Purchase Order To: Gifted Education Press; 10201 Yuma Court; P.O. Box 1586; Manassas, VA 20108. Telephone – 703-369-5017. Email: [Mfisher345@comcast.net](mailto:Mfisher345@comcast.net) All orders under \$50.00 must be Prepaid. **THANKS!**