Systems Newsletter

Center for Gifted Education
The College of William and Mary

Summer 2006 Volume 14 Number 3

Future Prospects for Gifted Education*

I have avoided putting the term "policy" in my title because my experience has been that just the term "policy" is enough to start a mass exodus. I have thought about that phenomenon a lot over the past few years and have concluded that the exodus is caused by two major beliefs: first of all, that policies have nothing to do with my day to day work, and second, that policies may be significant but they are made by important people with authority who tell us what to do and we have to do it. If you hold to the first idea that policies do not affect you, you are dead wrong, and for the second, it is only true if we let it be true. We cannot create change without the engines of change. If we want a support system for gifted students we must create one through changes in policy.

I have recently written a book (*Driving Change in Special Education: Alternative Futures,* published by Paul Brookes Co.) which proposes three different futures for American education and how they might affect special education, including gifted education. I would like to discuss these with you today.

One of the three choices for the future is the status quo. This would mean that we would just continue on the path that we are on and "don't make things worse with new planning." As difficult as this status quo strategy would be with children with disabilities, it becomes much more irrational with regard to the gifted.

The status quo turns out to be a scattering of programs across the country with very little support infrastructure to back up the classroom teacher. One of the problems of a democratic society is that it tends to deal with current pressing issues rather than long-term problems. It is our preference for short range solutions that makes the status quo such a jumble of policies and mix of sometimes contradictory rules and regulations. No one would dream of creating from scratch the jumble of rules and standards for gifted education that now exist, but of course such rules were dreamed up to cope with a particular short range problem. Our status quo is merely the mix of policies emerging from the cauldron of past immediate concerns.

One consequence of the status quo is what I call "I've got it made." If calling someone "gifted" causes some students to relax and think they "have it made," then we have done them a real disservice. It is not the mediocre golfer who spends hours on the putting green or practicing various shots. It is the professional who is already far superior in talent to the average golfer! When you consider success in the arts or

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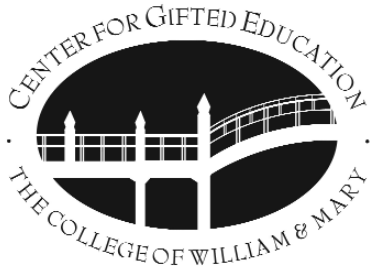
*This article is an excerpt from a speech given at the 2006 Javits Conference in Hartford, Connecticut by Dr. James Gallagher, Professor Emeritus, University of North Carolina - Chapel Hill.

In This Issue



From the Editors

Welcome to this Summer Update issue of *Systems*! In this issue, we present several articles on the theme Sustaining Educational Change. The first article is excerpted from Dr. James Gallagher's presentation at this year's Javits Conference in Hartford, CT. In this talk, Dr. Gallagher discusses several issues which he considers essential to the future of gifted education. Next, our Executive Director shares her thoughts about the graduating doctoral students and their accomplishments. Dr. Valerie Hastings-Gregory discusses the creation of a new generation of scientists through the Center for Gifted Education's Project Clarion. We also share student products from Project Athena that demonstrate the students' understanding of the concept of change. Educational change also depends upon individual change. Several master's and doctoral students at the Center for Gifted Education have shared their thoughts on how their time at the College of William and Mary has changed their educational practice. Finally, we provide a bibliography of references on the issue theme. As always, we hope that you find the information contained in this issue of *Systems* useful.

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business or scientific investigation, the same results occur. The more talented you are, the more will be expected of you in terms of intensity of effort. The payoff is that if you are doing something that you love, then you are willing to do the extra work involved. Our gifted students should be under no illusion that their talents will make life easier, though they may make life more interesting. If you find a gifted student wandering around looking for something to do or playing a video game, that is the ultimate criticism of our status quo educational programs.

Given our tentative toehold in education, almost any serious movement to educational reform would seem to have promise for a better future. Let us consider the potentials of the two major changes that I have perceived.

One of these futures proposes a general education initiative which sees the drawing back of special education into the general education pattern. This is reflected in the current policy of inclusion or the bringing of exceptional children into the regular classroom with special consultants helping the general education teacher.

While inclusion focuses upon children with disabilities, programs for gifted students have felt the same pressure to abandon specialized classes or schools in favor of a generalized, inclusive program. It is clear that this push toward inclusion is present in our modern public schools. Will this emphasis on meeting minimum or basic standards in the No Child Left Behind Act (NCLB) affect gifted students? One can already hear their cries: "Boring! Boring!"

The second model envisions a multidisciplinary support system that would integrate health, social, and educational services into a multidisciplinary system for all students. This support system would reach all children in need of special services, not just those currently designated as eligible for special education services.

This system would maintain and extend support infrastructure elements such as research, personnel preparation, and technical assistance and allow for diverse educational adaptations to meet local needs. The school would become a community center for a variety of services with education at the core. Such a center, staffed with psychologists, social workers, speech pathologists, etc., could increase the likelihood of discovery and the encouragement of talent, as well as planning for children with special needs. It would be a special advantage to those who teach exceptional children.

The disadvantage, of course, would be the required changes in special education legislation. Many changes in funding flows for mental health, child care, and related programs would be required, and costs would increase.

Why talk about such changes? Knowledge drives change, and we now have more knowledge about gifted students than we had before. One key to our new understanding is the genetic term *multiplier effect*. A multiplier effect occurs when a single impetus that may be small in magnitude sets into motion a chain reaction of events that can result in amplified growth of a measurable outcome (Papierno, Ceci, Makel & Williams, 2005). In other words, small causes can result in large outcomes. Educationally, this means that we should open up many experiences for all students and then provide additional practice and coaching for those students who excel.

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From the Executive Director

Dr. Joyce VanTassel-Baska

The following is excerpted from the luncheon speech given by Dr. VanTassel-Baska for graduates and their families on May 14, 2006 in the Wren Great Hall.

Today is about young people who have been successful in reaching new levels of talent development and attaining them in very tangible ways because the talent development mechanisms were in place: supportive family, caring peers, a structured program, and plans for a career. Our students at William and Mary have experienced that needed talent development process up close: being selected for a nationally recognized program, having a cohort of other students with similar interests and abilities, opportunities for rigorous academic experiences, and mentoring and career guidance along the way. They leave here today creative and productive, and perhaps more than at any point in their life, highly challenged. At no other time in their adult life will progress be so carefully watched and nudged forward in the direction of higher learning. But further talent development occurs when no one is looking. As John Ruskin, the 19th century essayist and artist, noted about himself:

> *"[T]here is such a thing [as genius], and it consists mainly in a man's doing things because he cannot help it. – intellectual things, I mean. I don't think myself a great genius, but I believe I have genius; something different from mere cleverness, for I am not clever in the sense that millions of people are – lawyers, physicians, and others. But there is the strong instinct in me which I cannot analyse to draw and describe the things I love – not for reputation, nor for the good of others, nor for my own advantage, but a sort of instinct like that for eating or drinking…"*

May you all hunger after intellectual acts of genius long after you have left William and Mary, help others less fortunate along a path of talent development, and like Ruskin, find your way to make the world more beautiful. We do intellectual work because we cannot help it. Thus, you will continue to research and write because you must.

I am very proud of each of our doctoral graduates for their intellectual energy and their display of persistence, tenacity, and resilience in the face of what could be considered the mountains of the doctoral degree that need to be scaled. The first mountain, of course, is the coursework itself—some more challenging than others, based on individual faculty and course expectations. The second mountain is the comprehensive exams, both written and oral, that test broad knowledge of subject matter in gifted education but also in research, and the core areas of leadership development. But for most people, the steepest climb is the final mountain—the dissertation study itself. These students have done a masterful job of scaling all of these mountains to find themselves here today.

Wenyu Bai

Wenyu arrived at William and Mary as a graduate student from China in 2000 and began work at the Center as a graduate assistant, at that time working on a number of different projects. Primarily in the last three years, he has been our "king of data" for Project Athena, among other grants, ensuring that data entry and preliminary analyses have been completed. His dissertation topic remained true to his own interests in the philosophically gifted, exploring the developmental strategies employed by gifted learners in pursuing their path of development at secondary level.

Heather French

Heather came to William and Mary from middle school teaching of English in Florida. Her comparison study of the use of *Jacob's Ladder*, a reading comprehension and higher level thinking program, with 3-5 grade gifted and non-gifted students, broke new ground in understanding the curricular efficacy of an intervention for which she was one of the developers for our federal grant. She has been an outstanding doctoral student at the College, receiving the SOE Doctoral student award, as well as the Gifted Education award of Excellence last year. She worked at the Center for three years as a graduate assistant for Project Athena, as well as for two other professors—Dr. Harris on a web portfolio project and Dr. Moore whose classes she taught while he was on sabbatical.

In all of her work in class and outside of it, Heather was marked by an enthusiastic and upbeat nature coupled with sound intellectual skills that could be applied to any of her many academic interests.

Kim Tyler

Kim began her program with us as a pullout resource teacher of the gifted in York County, after teaching several years in the Department of Defense Schools program in Germany. She spent her year in residence as a graduate assistant at the Center, working on the administration of the Saturday and Summer Enrichment Program. Her dissertation study focused on teacher perceptions of both self efficacy and the use of differentiated strategies in the classroom. A consummate teacher of elementary age gifted students, Kim is moving to higher education this next year as an Assistant Professor of Elementary Education at Texas Wesleyan University, with plans to start a program there in gifted education.

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Bess Worley

Bess came to William and Mary and our Center fresh out of her master's program in gifted education at Baylor University in Waco, Texas, with a strong interest in the arts and particularly music. She played out her interest in musical theatre locally and vicariously enjoyed it through her husband Scott, a practicing musician. Bess served as a graduate assistant at the Center for three years, working on a number of different research and evaluation projects. She also has been very active in the Virginia Association for the Gifted and the state advisory committee on gifted and talented. Her prowess and skill for research work won her the Galfo award for research last year, enabling her to focus more time on dissertation and consulting work this year. Her study of the characteristics, behaviors, and classroom practices of effective teachers in specialized arts schools for the gifted provided an exploratory glimpse of these schools from an instructional vantage point. Bess will begin her administrative career in the fall as Coordinator of Gifted Programs and Staff Development in Gloucester Public Schools.

Susannah Wood

Susannah came to William and Mary from three years as a counselor in Newport News, VA, as a master's student in counseling and stayed on for her doctorate. She has the distinction of taking all the gifted courses available in the program as well as the goal of establishing her own gifted counseling center at some point in her future. Having worked with gifted adolescents at the University of Richmond Governor's School for several years, she is passionate about the social and emotional needs of gifted learners. Her dissertation was on student perceptions of counseling opportunities afforded these students in school. She will begin her career at The University of Iowa as an Assistant Professor with an appointment in the Belin-Blank Center for Gifted Education and Talent Development this fall. She received the Margaret Thatcher Award on graduation day from the School of Education, one of the most prestigious awards bestowed by the College.

Dr. Carol Tieso presented mementoes to five master's graduates of the program: Megan Balduf, Easter Christopher, Lydia Lassalle, Peggy Jacquot, and Martha Hanks-Nicholls. These students will all graduate in August. 🕮 🕮 🕮 🕮 🕮

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The challenging problems are presented to the whole class, and we can see who emerges as skilled and responsive to such stimulation. Those who prove themselves to be outstanding in this effort can and should be taken to more complex and difficult problems by specialists in gifted education or in content areas. This is quite different from keeping the experience to only a small number of identified gifted students. But favorable environment means also that we provide opportunities for the talented to continually practice the desired skill or talent. Whether the talent is creative writing or solving mathematical theorems or playing ping pong, the original genetic talent means little without constant and intense practice.

What should educators make of this multiplier effect and its reliance on initial conditions? We need to create the favorable conditions for children to show their talents, thus enhancing the gene-environment interaction. Our growing pre-kindergarten programs should be a stimulating environment where all kinds of experiences can be provided as one way to discover those children with special gifts in a given area.

One of the other things we realize from the Matthew effect is that the gain achieved from the initially advantaged is disproportionate to the gain achieved by the initially disadvantaged. In other words, the initially gifted will gain from special stimulation much more than those who were not genetically gifted in whatever domain is being pursued. The role of education of gifted students is to find those youngsters with observed special talents and develop them much further than they would have gone without that special multiplier effect.

That is why policies and infrastructure in education matter – because they can create the environment which will allow us to find those dormant talents and develop (or fail to develop) them. The problem with such policies as NCLB (Gallagher, 2004) is that it concentrates on attaining lower minimal skills and does not allow the youngsters with true superior ability an opportunity to display them. Certainly, doing test exercises over and over again in class in order to pass basic competency tests is not the environment for flowering multifaceted talents.

If we determine that pre-kindergarten is merely fun and games or that primary school curriculum is merely focused on basic skills, what does that do for the stimulation of dormant talent genes? If we instead create a rich variety of early experiences and note carefully which youngsters respond, can we not create the beginning of many multiplier effects?

I have endorsed the importance of a support system for children with disabilities for over thirty years. It takes policy changes to create that. This means a well-funded enterprise including special personnel preparation, technical assistance to individual teachers, research, program planning, communication systems, data systems, etc. This is relatively easy to conceptualize because those pieces are in place in many states. Now, what is the chance that a parallel system could be created exclusively for gifted students? As the old baseball pitcher Dizzy Dean said, "We have two chances, slim and none."

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Yet these are important services for quality programs for gifted students. So what can be done? I would propose that we put our efforts into providing such support services for general education. They need it as much as we do. Then, when established, we can lobby to have personnel in these multidisciplinary services that focus on gifted students. The Board of Cooperative Educational Services (BOCES) in New York state is one example of such a support system.

While we should support the work done in our own field which often spills over into general education, we should also be aware and supportive of those things happening in general education that can be of help to gifted students. Anything that promotes rigor in content, promotes the sciences or arts, strengthens teacher preparation, or improves Advanced Placement programs is good for us, as is International Baccalaureate. A policy does not have to have the term gifted in it to be helpful for gifted students. These initiatives need to be promoted by us. Furthermore, when we support these more general programs, we may find that we have gained some allies for our own cause.

Does this mean that we shut down our gifted education operations like the Javits program and rely upon general education to carry the ball for us? No indeed. We need to remember that we have contributed considerably to education as it is today through our special efforts for gifted students. Tomlinson and Callahan (2004) pointed out our many contributions to general education, which included an emphasis on advanced thinking processes and metacognition, multiple modes of instruction, and the seeking of hidden talent by unconventional methods. We need to be alert to general policies to improve education which will help gifted education, while at the same time doing work that directly aids talented students.

The slogan that we have supported, *Excellence for All*, turns out to be the desired way to energize and enrich many gifted students as well. But it also requires us to learn new roles. The excitement and responsiveness of these students to new opportunities for learning can help us through the inevitable frustrations ahead.

References

Gallagher, J.J. (2004). No Child Left Behind and gifted education. *Roeper Review, 26*(3), 121-123.

Papierno, P.B., Ceci, S.J., Makel, M.C., & Williams, W.M. (2005). The nature and nurture of talent: A bioecological perspective on the ontogeny of exceptional abilities. *Journal for the Education of the Gifted, 28*(3/4), 312-332.

Tomlinson, C. & Callahan, C. (1992). Contributions of gifted education to general education in a time of change. *Gifted Child Quarterly, 36*(4), 183-189.

Project Athena Student Products

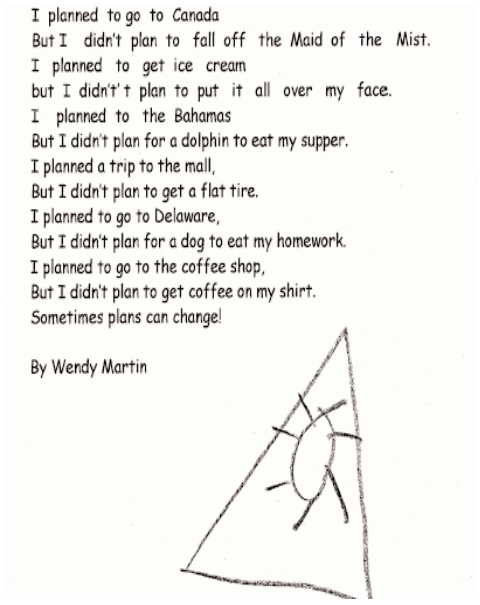
by Susan McGowan

The following student artifacts represent a variety of products which were collected by Project Athena teachers at the end of Implementation Year Three (2004-2005) of Project Athena. They characterize authentic assessments in their connection to real-world issues, meaningful application of knowledge and skills, and the use of engaging questions of importance.

The following criteria were used by the teachers to select student samples for inclusion in a product-sharing session held in March at The College of William & Mary:

- Student work should be related to a concept, theme, or literature selection studied in the unit.
- Student work should directly reflect unit goals of developing literary analysis and interpretation, persuasive writing skills, linguistic competency, listening and oral communication skills, critical thinking skills, or developing an understanding of the concept of change.
- Student work should exhibit the use of graphic organizers or Athena-created models.

The following student work sample illustrates third grade students' facility with poetry as a literary form as well as their understanding of the importance of change, particularly as it affects people in various circumstances, times, and cultures. The five change generalizations utilized by the William and Mary language arts units were supplemented with a class-generated generalization: *Sometimes we make plans and things change!*



I planned to go to Canada
But I didn't plan to fall off the Maid of the Mist.
I planned to get ice cream
but I didn't't plan to put it all over my face.
I planned to the Bahamas
But I didn't plan for a dolphin to eat my supper.
I planned a trip to the mall,
But I didn't plan to get a flat tire.
I planned to go to Delaware,
But I didn't plan for a dog to eat my homework.
I planned to go to the coffee shop,
But I didn't plan to get coffee on my shirt.
Sometimes plans can change!

By Wendy Martin

Graphic organizers allow students to monitor metacognitive processes as they plan, assess, and reflect on their work.. In the second artifact, a fifth grade student has identified specific examples from literature hich illustrate the units' change generalizations.

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Project Clarion: Improving Science Instruction and Developing "Lab-Coat Idols" in Early Childhood Education

by Dr. Valerie Gregory

The cover of the February, 13, 2006 issue of *Times* magazine poses the question, "Is America flunking science?" In response to this question, one featured article points out that "after more than a half-century of unchallenged superiority in virtually every field of science and technology, from basic research to product development, America is starting to lose ground to other nations" (Lemonick, 2006, p. 24). The article reiterates America's "quiet crisis" by stating that "unless things change…the breathtaking burst of discovery that has been driving our economy for the past half-century will be over" (Lemonick, 2006, p. 24).

Several forces are blamed for this decline; the quality of education in math and science in elementary and high schools is one of them. As described by Carlo Parravano, Director of the Merck Institute for Science Education, "Children love to explore the natural world. They love to make sense out of it. By fourth grade, we squash that curiosity with the way we teach science" (Keegan, 2006, p. 26). Indications are that our students lose enthusiasm for science because they experience excessive "rote learning" and lack exposure to "lab-coat idols" who inspire them to become scientists (Keegan, 2006, p. 26). Moreover, "Teachers are so frightened of [these] subjects that they transmit the fear to the children"; thus, there is a "shrinking pipeline of talented U. S. students pursuing the sciences" (Keegan, 2006, p. 27). There is a critical need for increased "lab-coat idols" among America's teachers.

Project Clarion, a five-year Federal Javits grant awarded to the Center for Gifted Education at the College of William and Mary, responds to concerns about the "shrinking pipeline" of science talent by addressing four major goals: 1) identification of potential science talent, 2) creation of earth, life, and physical science curriculum units designed to develop science talent in pre-kindergarten through third grade, 3) development and implementation of professional development models to improve science instruction, and 4) execution of research to examine short- and long-term impact on teaching and learning. All four goals are highly interactive and interdependent in the quest to identify and develop talented science students. The hands-on, inquiry-based units provide opportunities for creativity and innovation compatible with the strengths of culturally and linguistically diverse gifted learners. It is hoped that such opportunities will encourage this underrepresented group to pursue careers in science. Moreover, all four goals target the need to "develop" early childhood and primary teachers who can identify and nurture science talent. *Project Clarion* is being implemented in three Virginia school districts: Chesterfield, Fairfax, and Gloucester County Public Schools.

Project Clarion acknowledges that "educational change is dependent on what teachers do and think…" (Fullan & Stieglebauer, 1991, p. 117) and that fostering efficacy for teaching science takes time and effort. Multiple resources are needed to develop teachers' scientific knowledge and understanding, as well as to expand their instructional repertoire. It is hoped that by putting high quality curriculum for science talent development into the hands of teachers and developing their capacity to teach it through ongoing professional development, teachers will move science instruction beyond rote learning to inquiry and investigation. Such instruction is designed to inspire talented students to pursue science.

Since one of *Project Clarion*'s goals is development and implementation of professional development to improve science instruction for high-ability youngsters, it was important to examine and apply qualities of effective professional development—

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Project Athena

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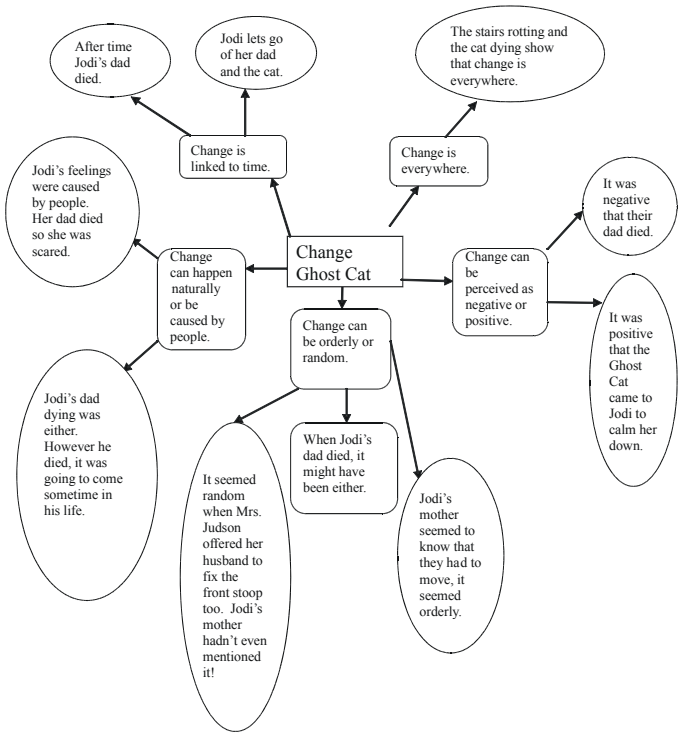

Project Clarion

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professional development that improves student achievement by encouraging, supporting, and sustaining change in classroom practice. The National Staff Development Council (NSDC) and other resources were helpful in this effort.

The National Staff Development Council (NSDC) developed and revised standards for professional development that reflect the research on effective professional development and "improve[s] the learning of all students" (Hirsh, 2001, p. 11). Twelve standards address the context, process, or content of effective professional development. *Context standards* describe learning communities, leadership, and resources that support adult learners. *Process standards* reflect the need for data-driven professional development that is based on a variety of designs which foster collaboration in the learning process. Finally, *content standards* concentrate on providing professional development content that deepens educators' content knowledge and provides them with research-based instructional strategies and assessments that focus on student achievement of rigorous academic standards (Hirsh, 2001, p. 11).

In addition to the work done by NSDC, other experts, practitioners, and researchers support the standards articulated by NSDC and further define qualities of powerful professional development. Experts, practitioners, and researchers interested in professional development suggest that quality experiences focus on quality teaching and learning, honor staffs' professionalism, promote inquiry and reflection, and engage participants in some level of application (Easton, 2004, p. 3-4). Moreover, effective initiatives are characterized by activities of longer duration, greater subject-area focus, increased active learning, and greater coherence (Birman et al., 2000; Garet et al., 2001). They also tend to include non-traditional, job-embedded experiences that go beyond workshops or conferences and engage teachers in talk about instruction and application.

After considering these effective professional development practices, the *Project Clarion* team decided to identify "ambassadors" for each school implementing the Clarion science curriculum. Ambassadors visit their schools on a weekly basis and have four key roles: 1) to serve as a visible, on-site liaison between the Center for Gifted Education and schools participating in *Project Clarion*; 2) to provide technical assistance implementing *Project Clarion* curriculum units; 3) to observe teachers implementing Clarion units and provide feedback for unit revisions and improved instruction, and 4) to provide ongoing, concrete support for unit implementation. Each ambassador's tasks vary, depending on the culture of the school, needs of the teachers, and observations of teaching and learning with the science curriculum. Ambassadors may model lessons in classrooms, facilitate "mini-workshop sessions" on such topics as grouping strategies to meet the needs of high ability learners, or provide resources that teachers need to teach units. Ambassadors also may hold discussion groups with teachers about implementation attempts, develop and distribute monthly newsletters, or review student work.

Although the first year of curriculum implementation for *Project Clarion* was just completed, it appears that the ambassadors play a vital role in the curriculum implementation process and in the improvement of instruction for emerging science talent. Teachers acknowledge that teaching the science curriculum units has been a stretch for them; yet, they have been rewarded by increased student enthusiasm when they don their lab coats to teach the science curriculum. Moreover, teachers report that they are "discovering" that students are much more capable than they had realized. Participating primary teachers have forged ahead in their quest to improve science by teaching *Project Clarion* curriculum units; throughout the process ambassadors have been, "guides on the side", intent on supporting teachers' attempts to become "lab coat idols" who motivate talented youth to become future scientists.

References

Birman, B. F., Desimone, L., Porter, A. C., & Garet, M. S. (2000). Designing professional development that works. *Educational Leadership, 57* (8), 28-33.

Easton, L. B. (2004). Foreword. In L. B. Easton (Ed.), *Powerful designs for professional learning*. Oxford, OH: National Staff Development Council.

Fullan, M. & Stieglebauer, S. (1991). *The new meaning of educational change.* New York: Teachers College Press.

Garet, M., Porter, A. C., Desimone, L., Birman, B. F., & Suk Yoon, K. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38* (4), 915-945.

Hirsh, S. (2001). We're growing and changing. *Journal of Staff Development, 22* (3), 10-13.

Lemonick, M. D. (2006, February 13). Are we losing our edge? *Time, 167*, 22-30.

Keegan, R. W. (2006, February 13). Science in school: Looking for a lab-coat idol. *Time, 167,* 26-27.

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Anfara, V.A., Brown, K.M., Mills, R., Hartman, K., & Mahar, R.J. (2000, April). *Middle level leadership for the 21st century: Principals' views on essential skills and knowledge; Implications for successful preparation.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Borko, H., Mayfield, V., Marion, S., Flexer, R., & Cumbo, K. (1997). Teachers' developing ideas and practices about mathematics performance assessment: Successes, stumbling blocks, and implications for professional development. *Teaching and Teacher Education, 13,* 259-278.

Bransford, J.D., Brown, A.L., & Cocking, R.R. (Eds.). (1999). *How people learn: Brain, experience, and school.* Washington, DC: National Academy Press.

Bryk, A.S., Lee, V.E., & Holland, P.B. (1993). *Catholic schools and the common good.* Cambridge, MA: Harvard University Press.

Coburn, C.E. (2003). Rethinking scale: Moving beyond numbers to deep and lasting change. *Educational Researcher, 32*(6), 3-12.

Coburn, C.E., & Meyer, E.R. (1998, April). *Shaping context to support and sustain reform.* Paper presented at the American Educational Research Association Conference, San Diego, CA.

Consortium for Policy Research in Education. (2000). *Bridging the K-12/postsecondary divide with a coherent K-16 system.* (CPRE Research Brief 31). Retrieved from http://www.cpre.org/Publication/rb31.pdf

Desimone, L. (2002). How can comprehensive school reform models be successfully implemented? *Review of Educational Research, 72*(3), 433-479.

Elmore, R. F. (1996). Getting to scale with good educational practice. *Harvard Educational Review, 66*(1), 1-17.

Elmore, R.F. (2000). *Building a new structure for school leadership.* Albert Shanker Institute. Available from http://www.shankerinstitute.org/Downloads/building.pdf

Furtwengler, W.J., & Hurst, D. (1992, April). *Leadership for school quality–personal challenge, the missing factor.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Guskey, T. R. (1994). Results-oriented professional development: In search of an optimal mix of effective practices. *Journal of Staff Development, 15*(4), 42-50.

Guskey, T.R. (2000). *Evaluating professional development.* Thousand Oaks, CA: Corwin Press.

Hallinger, P., & Heck, R. (1998). Exploring the principal's contribution to school effectiveness. *School Effectiveness and School Improvement, 9*(2), 157-191.

Haug, C. (1999). *Local understanding, resources, and policies: Obstacles to standards-based mathematics education reform.* Unpublished doctoral dissertation. University of Colorado, Boulder.

Hill, P.T., & Celio, M.B. (1998). *Fixing urban schools.* Washington, DC: Brookings Institution Press.

Hipp, K.A., & Huffman, J. B. (2000, April). *How leadership is shared and visions emerge in the creation of learning communities.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Kennedy, M. (1999). Form and substance in mathematics and science professional development. *NISE Brief, 3*(2), 1-7.

King, M.B., & Newman, F.M. (2000). Will teacher learning advance school goals? *Phi Delta Kappan, 81,* 576-580.

Krajcik, J.S. (1991). Developing students' understanding of chemical concepts. In S. Glynn & R. Yeany (Eds.), *The psychology of learning science* (pp. 117-147). Hillsdale, NJ: Lawrence Erlbaum.

Lampert, L. (2003). *Leadership capacity for lasting school improvement.* Alexandria, VA: Association for Supervision and Curriculum Development.

Leithwood, K., Jantzi, D., Ryan, S., & Steinbach, R. (1997, March). *Distributed leadership in secondary schools.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Mayer, R. E., & Wittrock, M. C. (1996), Problem-solving transfer. In D.C. Berliner & R. Calfee (Eds.), *Handbook of Educational Psychology* (pp. 15-46). New York: Simon Schuster Macmillan.

McLaughlin, M.W., & Mitra, D. (2001). Theory-based change and change-based theory: Going deeper and going broader. *Journal of Educational Change, 2*(4), 301-323.

Novak, J.D. (1998). *Learning, creating, and using knowledge.* Mahwah, NJ: Lawrence Erlbaum.

Pankratius, W. J. (1990). Building an organized knowledge base: Concept mapping and achievement in secondary school physics. *Journal of Research in Science Teaching, 27*, 315-333.

Perry, M. (1998). Transitional knowledge in the acquisition of concepts. (Doctoral dissertation, University of Chicago, 1987). *Dissertation Abstracts International, 48,* 11B, 3433.

Pittman, T.S. (1998). Motivation. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology, Vol. 2* (4th ed, pp. 549-590). New York: McGraw-Hill.

Rittle-Johnson, B., & Alibali, M.W. (1999). Conceptual and procedural knowledge of mathematics: Does one lead to the other? *Journal of Educational Psychology, 91,* 175-189.

Silins, H. C. (1994). Leadership characteristics and school improvement. *Australian Journal of Education, 38*(3), 266-281.

Spillane, J.P., Halverson, R., & Diamond, J.P. (2001). Investigating school leadership practice: A distributed perspective. *Educational Researcher, 4,* 23-28.

Spillane, J.P., Reiser, B.J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research, 72*(3), 387-431.

Stokes, L.M., Sato, N.E., McLaughlin, M.W., & Talbert, J.E. (1997). *Theory-based reform and problems of change: Contexts that matter for teachers' learning and community* (R97-7). Stanford, CA: Stanford University.

How Has the Master's Program in Gifted Education Changed My Life

When I returned to teaching six years ago, I had one recurring worry. No one in the administration had any idea what went on in my classroom. I could have been a terrible teacher and no one would have cared, as long as the problems didn't spill out beyond the threshold of the door.

I spent the next five years learning the craft of teaching by trial and error and by reading a huge number of professional development books. I implemented my own version of curriculum-based measurement, pre-tested students in certain subjects to eliminate mastered work, created thematic units based on the required curriculum and offered several types of enrichment. However none of these strategies were used by other teachers in my school and I was uncertain about their educational value to my primary students.

As I complete my MA in Curriculum and Instruction, with an emphasis in Gifted Education, I see my pedagogical choices in relationship to the full scope of educational best practices for both gifted and typical students. Now I know why some of the techniques I selected were successful and how to use them more effectively in the future. I also understand some of the pressures and challenges encountered by teachers, administrators and leaders in the field of education as we struggle to redefine a "typical public school education."

Through my experiences at the Center for Gifted Education, I have been motivated and equipped to become an advocate for gifted students. In the fall, I will be returning to teach in California where most school districts claim to meet the needs of gifted students exclusively through differentiation in the regular classroom. I anticipate many opportunities to share formally and informally with my future colleagues in the upcoming years.

by Peggy Jacquot

Henry David Thoreau said, "Go confidently in the direction of your dreams. Live the life you have always imagined." Not only has the graduate program at The College of William and Mary surpassed my dreams, it has also encouraged me to live the life I have always envisioned as an educator, student, and gifted woman. I enrolled in the Educational Policy, Planning, and Leadership Master's Gifted Program with the purpose to simply become a better teacher and refine my instructional practices. Through my coursework, my professors challenged me to think beyond the classroom's walls and instructed me on leadership practices that will expand my sphere of influence. I now plan to seek administrative roles that will enable me to improve gifted services in order to impact more children's development. As a student, my advisor worked with me to adapt my program to match my individual needs. I desperately sought an intellectual environment and rigorous curriculum, unlike anything that I had experienced. This was honored through introductory courses being waived and being accelerated into some doctoral level courses due to my gifted teaching experiences and undergraduate classes in gifted education. Taking advanced coursework provided me with opportunities to wrestle with new material and advanced perspectives. By working at the Center for Gifted Education, I have had opportunities to present at national conferences, write and edit curriculum, and network with other professionals. The result of managing these rich experiences and challenging graduate curriculum has been an awareness and acceptance of my own gifts and talents. Personally, the graduate program has stretched my character, strengthened my dedication, and intensified my passion. It is exciting to think that the journey of my professional career is still just beginning. My dream of changing the lives of children and leaving my mark in the field of gifted education will continue to come to fruition because of my training at The College of William and Mary.

by Mandy Fordham

Before my Master's program, I wasn't quite sure what "gifted" was. I knew I had taken a test resulting in my being "gifted," which allowed me to attend GATE (Gifted and Talented Education) classes that consisted of logic puzzles and fun projects. I loved getting out of class and spending time on my GATE work. Looking back, I know that the program provided enrichment (poorly) and no acceleration. It was the stereotypical "fluff" down the hall, and I understand the resentment I faced from some of my teachers when I left their class for GATE. I know now that there was so much more the school system could have done for me and the other gifted students.

My classes at William and Mary, particularly on the affective and cognitive characteristics of gifted children, have greatly expanded my view of what it means to be gifted. These classes also helped me understand my own giftedness. I recognize that my self-imposed isolation during junior high was a product of my giftedness - my need to be independent and work alone. My intense, ever-changing passions were a reflection of my giftedness, not an inability to stick with one thing. By recognizing these aspects of giftedness in myself, I think I will be a better teacher of gifted students, and I know I will do my best to help them see that their behaviors and actions are not as strange or different as they may fear.

Being more aware of what giftedness is and how it manifests itself in others has been eye-opening for me. I know that my previous definition of gifted was very limited. Learning about these different forms of giftedness, and how to address them, is such useful information. One of the things I will carry close when I finish my program is the problems faced by gifted learning disabled students, and culturally and linguistically diverse gifted students. This program gave me a window through which to view my previous learning and teaching experiences. I have a better understanding of the ways in which gifted students may show their gifts and that has made me want to become an advocate for all kinds of gifted students.

by Megan Balduf

Systems Newsletter

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