Faculty Spotlight: Dr. Howie Budin, CCTE

Dr. Howie Budin remembers his first interaction with technology in the classroom vividly. “A computer showed up in ’78, an Apple II…We had no idea what to do with it. Old Apples had one disk drive and no complex operating system, so any time you operated a program it was from disk.” Students played one game, Little Brick Out, featuring Apple’s extremely low resolution graphics. Howie remembers, “We played that for half a year and started wondering what the computer was really for. So I wondered and wondered, and I came [to Teachers College] to study programming.”

Continued on 2
At the time, Bob Taylor taught all programming classes. Howie and Bob developed a strong collegial relationship, and after Howie completed Programming II as a student, Bob invited him to teach a section of Programming I. Howie has been with TC ever since, nearly 27 years.

During Howie’s first years at TC, technology in schools was a wildly popular field of study; many classes at TC reached 80 or 90 students. In 1983, Howie and Bob Taylor envisioned a Intensive MA program in Computing and Education for teachers around the world. The concept: students visit Teachers College for a one month intensive summer session in July, and remaining coursework is completed from home. This presented a challenge, because all communication was by telephone or letters at that time. The burgeoning program grew quickly, bringing technology training to teachers across the globe. Today, CCTE still offers this program as a part of the Computing and Education offering. The advent of the internet engendered a shift from letters and telephone to email, web cams, and online discussion boards.

In 2007, Howie suggested offering a online version of the MA in Computing and Education where students could complete all coursework online. They started with about 8-10 students from all over the world, and now the cohort is about fifty students. Both online and intensive programs are geared for K-12 teachers, technology directors, or specialists in schools. Many students stay and work in schools, and others go on to doctoral work.

These days, most of Howie’s time is spent coordinating the Online and Intensive masters programs in the CCTE program. Much of his work is administrative: spreadsheets, forms, and proposals. His favorite part of the job is advising 80 masters students. “It’s one of the things I like best. I talk online with people through Skype or Adobe Connect. Every day, I’m having one-on-one or group meetings to talk about advisement and masters papers. I get to know [the students] really well that way. All of [them] are interesting. One person wants to bring videos to small villages in Africa. Another one wants to do something in Haiti with technology.”

In his spare time, you’ll find Howie reading. “I’m old fashioned. I like to hold books, pick them up.” Howie is a big music fan. You’ll find everything from Bob Dylan to Wilco in one of his playlists. He also plays guitar, specifically folk music from the 60s and 70s.
Alumni Spotlight: Stacia McFadden, CCTE

Stacia McFadden completed her undergraduate work at Elizabeth City State University in 1997 and secured a job at IBM shortly after. She started her career as a SAP Programmer and eventually became a technical support team member for corporate headquarters, supporting two senior Vice Presidents. As a young woman, Stacia looked around and realized she was the only female on her team. “Coming from a small, historically black university in North Carolina and being a woman of color, I constantly had to prove myself. I had to prove I knew as much as they did about technology.”

And prove she did! She received three peer recognition awards during her four years at IBM, and created great relationships with her co-workers. Outside of work, Stacia began volunteering with the National Society of Black Engineers and the Black Network of New York, facilitating technology workshops. Here, she realized her passion for teaching. She gained much expertise at IBM, but ultimately, Stacia knew she wanted a more fulfilling job. She applied to just one school for graduate work: Teachers College. “I wanted to have the best training possible, and I knew that was at TC.”

Enrolling in the Communication, Computing, and Technology program at TC took Stacia’s career in a new, more meaningful direction. Classes and internships at Teachers College influenced Stacia’s view of the potentials of educational technology. “I had a great internship experience with the Reach the World nonprofit organization. I worked with an elementary school in the Bronx and the sailing crew of the boat Makulu II. The crew sailed around the world and reported findings to our class (and other classes in New York City) via online journals. It really extended the classroom in a meaningful way.”

After graduation in 2006, Stacia began her professional career with technology in K-12 classrooms. “It is apparent that meaningful learning experiences happen when students are engaged, and technology naturally encourages such engagement.” Stacia found success by incorporating technology in two specific ways. First, as a technology teacher, she consciously incorporated content area subject matter into technology and computer training lessons, building upon the teachers’ classroom curriculum. Attending department meetings and collaborating with teachers was essential to making this happen. Second, as a technology coordinator, she researched teachers’ lesson plans, providing them with ideas and support.

Currently, Stacia is the technology director at St. Patrick’s Episcopal Day School in Washington, DC. While she loves working with students in the classroom, Stacia realizes the value of making sure teachers are knowledgeable about and comfortable with the latest software and hardware. She facilitates several technology professional development opportunities for faculty and staff at St. Patrick’s. For example, she created Tech Tuesdays, a program specifically designed to educate teachers, cultivate ideas, and develop implementation.

In the future, Stacia hopes to focus on digital citizenship at her school. “Children today are digital natives, so most of them are very
Stacia McFadden - Continued

comfortable using technology. What they really need is guidance with how to use it effectively and responsibly. I want to make sure children are aware about how their use of technology impacts others, how their digital footprint remains online, and how a tweet, blog post, or photograph may have impact 5-10 years down the road.”

Pollak Awarded MET Lifetime Achievement Award

Dr. Henry Pollack, Visiting Professor in the Mathematics Education Program, received the Mathematics Education Trust (MET) Board of Trustees 2010 Lifetime Achievement Award. Awarded to just two distinguished scholars each year, the Lifetime Achievement Award is based on career accomplishments and accolades from peers in the field. Dr. Pollak was recognized at the MET Presidential Address on Thursday April 22nd. The Mathematics, Science and Technology Department sponsored a breakfast on Friday, April 23rd from 7-8:30am during the 2010 NCTM Annual Meeting and Exposition.

Reflecting on the achievement, Pollak notes “I am very honored. Last year was the 50th anniversary of the School of Mathematics Study Group [directed by the National Science Foundation]. I was there at the beginning. You sort of wonder, gee, did it make any difference? And the answer is yes, it did.”

Brunschwig Chairs NYAS Science Education Initiative

Fernand Brunschwig, Adjunct Assistant Professor in Science Education, currently chairs a Science Education Initiative supported by the New York Academy of Sciences (NYAS). The initiative provides support and resources for Science Professionals in the New York region through online and in person seminars, social networking, in person workshops, and a calendar of local events of interest. For a limited time, all New York City teachers are eligible for free membership!

To learn more, please visit:
http://www.nyas.org/WhatWeDo/ScienceEducation.aspx?tid=cedf093d-e78b-447f-b73d-6bd174006817
**Student Spotlight: Nick Wasserman, Mathematics**

Nick Wasserman, current doctoral student in Mathematics Education, mixes a penchant for adventure with a keen interest in mathematics. He graduated with a B.S. in Mathematics from the University of Texas in 2003 and subsequently traveled to India and South America. Educational systems abroad are fascinating to Nick, specifically ways of teaching mathematics. On his trip, Nick spent three months working with the Church of South India demonstrating interactive teaching methods while learning about the Indian educational structure. The very traditional, respectful, quiet style of teaching was different from what he experienced in many U.S. classrooms, where teachers and students are very interactive and even loud. The students’ thorough notes and good classroom behavior impressed Nick. “It speaks to some of the strengths of the Indian culture.”

Nick’s experiences traveling abroad were immensely rewarding. Refreshed and ready to continue with Mathematics Education, Nick returned to the U.S. and took a teaching position at James Bowie High School in Austin, Texas teaching Algebra and Geometry. After three years at James Bowie High, Nick decided to apply to Mathematics Education graduate programs to continue his academic career. He visited Teachers College and was impressed by the scholarship of the Mathematics Education faculty. “I came here with a level of respect [for] the work that [Teachers College professors] have done already. TC awarded the first American Ph.D. in Mathematics Education. Many of the field’s founding fathers walked these halls.”

Nick’s primary research interest is teacher education. This fall, he gave his prospectus presentation for his dissertation: *When beginning mathematics teachers report learning successful attributes: Reflections on teacher education.* Nick’s work explores where teachers learn successful teaching practices. Specifically, he examines three areas: teacher preparation programs, learning while teaching, and formative educational experiences.

Outside of his personal research, Nick is very involved with the Mathematics Education program. He has served as a Teaching Assistant and currently serves as a Student Teacher Placements Coordinator for Professor Weinberg. During the day, Nick teaches full-time at Marymount High School, a private all-girls Catholic college preparatory school in the Upper East Side. So what’s next for Nick?

Life after Teachers College holds many different options. Ultimately, he wants to continue his research and teach at the college level. He retains a close relationship with the UTeach Program at University of Texas, and would love the opportunity to work with them again. Wherever Nick ends up teaching, he would truly enjoy being a part of both the mathematics and mathematics education departments. This combination can sometimes be difficult to manage, but as always, Nick is ready for the challenge.

Nick’s affinity for adventure emerges outside of the classroom, too. He enjoys playing tennis, which he used to coach in Austin, disc golf, though the lack of space in New York City limits this, and hiking. The last two summers, Nick’s travels have taken him trekking on the Appalachian Trail and to Ecuador, where he and a friend explored the rain forest for a week. This summer, he is looking forward to chaperoning a trip to Greece with his Marymount High Schools students.
The Harlem Schools Partnership (HSP) Professional Development Workshops

The Harlem Schools Partnership (HSP) for Science, Technology, Engineering and Mathematics Education (STEM) celebrates the start of its second year by premiering a series of four professional development workshops for K-5 teachers in its Partner schools. The participants include teachers from PS 36, PS 28, PS 180, PS 153, PS 154, PS 76, and PS 161. Workshops are led and organized by faculty in the Department of Mathematics, Science and Technology and International and Transcultural Studies at Teachers College, Columbia University and met monthly over the course of the fall semester.

The activities of the workshop are grounded in inquiry-based practices and offer teachers real-world and practical applications of STEM for their classrooms. The first workshop in September began with a presentation by Dr. Felicia Moore Mensah with a focus on understanding students’ naïve conceptions in science. The second workshop in October began with a presentation by Dr. Ellen Meier on technology integration in the classroom. Dr. Erica Walker and Dr. Alexander Karp will lead the third workshop and focus on mathematics education. The fourth workshop will be led by Dr. Regina Cortina and Dr. Heidi Hayes Jacobs and will focus on curriculum design. Additionally, HSP graduate students participate in the workshop and provide follow-up for the participants.

The Harlem Schools Partnership for STEM Education is a collaborative effort of Teachers College, and the Fu Foundation School of Engineering and Applied Science at Columbia University in association with the New York City Department of Education (NYC DOE) and with support from the General Electric Foundation. Dr. Nancy Streim, Principal Investigator, and Associate Vice President for School and Community Partnerships, and Dr. Janell N. Catlin, HSP Project Director and Adjunct Assistant faculty in the Program in Science Education lead the Teachers College efforts of the HSP. For more information on the HSP or to become involved in the project, please visit our website or contact Dr. Janell N. Catlin at jcatlin@tc.edu.

Snapshots from HSP events
Dr. Donald Fulton, Adjunct Associate Professor of Science Education, describes himself as a “low metabolism person.” His predilection for the biological sciences is innate. “It’s just in me. You need [patience] to work on processes that are slow to come to fruition.”

Dr. Fulton’s love for science started during his studies in the College of Environmental Science and Forestry at Syracuse University. After graduation, he enrolled in Teacher Corps, a training program for urban educators. He started teaching science in elementary school classrooms in New York City shortly after. Dr. Fulton spent twelve years as a classroom teacher in East Harlem and Washington Heights. Then he taught biology at George Washington High School for three and a half years before taking a position as Assistant Principal. From there, Dr. Fulton was promoted to Principal and finally the District 8 Science Coordinator in the Bronx.

Teachers College came into Dr. Fulton’s life while he was working full time as a teacher in Washington Heights. A coworker mentioned a newly acquired federal grant for Spanish-speaking educators at Teachers College. Fluent in Spanish, Dr. Fulton scored in the top percentile in both English and Spanish speaking and writing tests. “I enrolled in the doctoral program, [and] came under the influence of two professors, Dr. Warren Yasso and Dr. Roger Anderson.” He recalls doing research with Professor Anderson as one of the highlights of his TC experience. “I can’t speak highly enough of him!” Dr. Fulton graduated with a doctoral degree from Teachers College in 1991.

He retired from the New York City Department of Education in 2002 and subsequently began a position at the New York Botanical Garden as Director of Children’s Education. One of his favorite projects at the Garden is called the Tree of Life. “It is a large image for the public about 30 feet long and 10 feet high that attempts to display the relationships between kinds of plants by breaking out each division by classes and orders.” The project still inspires his thinking about the evolution of plants, dinosaurs, and early humans.

While at the Botanical Gardens, Dr. Fulton occasionally encountered his former mentor, Dr. Anderson. “One day, Dr. Anderson offered me a teaching position [at Teachers College].” Dr. Fulton has been with TC for four years. In addition to teaching classes at TC, Dr. Fulton also teaches undergraduate science courses at Mercy College.

“I found that botanical sciences are not nearly as interesting to [my undergraduate students] as zoology or ecology. I believe one of the reasons for this is the desire for things that move at a faster pace.” To counteract this, Dr. Fulton utilizes video footage with time-lapse photography. “The Secret Life of Plants” is a lifesaver in my botanical science courses.”
Dr. Donald Fulton, Continued

After 30 years teaching at Mercy College, Dr. Fulton still looks forward to each class. “I try to inject humor [in my classes] all the time. I’m also fond of bringing in botanical oddities and leading field trips.”

Each semester, he tells his students at Mercy College, “It’s my goal to make all of you science literate and to make a few of you like science so much you just might want to change your current major.” He reflects with a laugh, “One time, a former student yelled ‘the Hudson isn’t a river; it’s an ESTUARY!’ [out a car window].” When he’s not being humorously engaged by former students, Dr. Fulton loves to explore nature, near his vacation homes in Florida and the Berkshires.

iDesign Technology Lecture Series

MST’s CCTE program hosted a Samsung Product demo on March 31st as a part of the iDesign Lab Speaker Series. The SDP-860 is a new digital presenter with upgraded features including a video camera. Ahram Park, a CCTE student, commented “I think the Sam Cam… has great potential in the classroom. Using the digital presenter in a large lecture room can help engage students, especially a large science lecture.” For more information about the iDesign Lab Speaker Series, visit:

MST Faculty Win Provost's Investment Fund Awards

MST Professors Dr. Joey Lee (CCTE), Dr. Alexander Karp (Mathematics), and Dr. Walker (Mathematics) received 2009-2010 Provost’s Investment Award. Dr. Lee and TC Faculty members Adriana Abdenur, Margaret Crocco, and Monisha Bajaj received $20,000 for their project Environmental Education & Sustainability Interactive Portal. Dr. Karp and Dr. Walker also received $20,000 for their project Problem Solving in Mathematics Education (PRIME): An On-Line Community for Teachers of Mathematics in Urban Schools.
OpEd:  *Soccer* by Daniel Gumarang, CCTE 2001

I must admit; I am not a fan of the game. ‘Futebol,’ as Brazilians refer to soccer, is just not my thing. Neither is baseball, basketball nor football, and as an American, that is probably a shame. Having witnessed Brazil’s passion for the game, there was plenty to learn from futebol.

Our Tier II Brazil 2009 team attended a soccer match between Flamengo and Fluminense at Estádio do Maracanã in Rio De Janero, Brazil. On the way, we rode the subway and I did not think much of it. The trip, I thought, would be just another sporting event, and I was prepared to be a passive participant. It was not until we entered the stadium that I was enlightened by a friend’s explanation that we were about to step into the world-famous Maracanã Stadium. I realized I was walking on what some regarded as sacred grounds. Maracanã is apparently what Mecca is to Muslims, and for me, a soccer idiot, the experience was about to be meaningful.

As we looked for a place to plant our bottoms, there was no way to avoid the Brazilian sun. Very quickly, we found ourselves under a sliver of shade that was fast disappearing as the sun began its descent. Unfortunately, the stadium’s roof was only a temporary solution because it was still hot. This new heat was as powerful as the sun, and try as I could, finding a barrier against it was impossible. The heat was coming from the fans; I was experiencing the heat of futebol passion.

During the game, I witnessed how soccer fans made every kind of noise. One in particular is the rhythmic humming of drums which went for a continuous 45 minute period twice. Fans of Fluminense and Flamengo danced in a trance, sang songs, waved giant banners, chanted and sometimes insulted the others with hopes that their efforts will be rewarded with victory. With high expectations, fans intensified rooting efforts when the ball was in the immediate area of the goal. When a player successfully drove the ball past the goalie, a celebratory pandemonium, the likes of I have never experienced, erupted! I also found it most interesting when fans clapped and cheered just the same when a player who appears to be just seconds away from scoring misses and fails to deliver. It is at this point that I made a personal connection to the game as an educator.

Like most games, soccer is played globally. For the most part, it is played by amateurs and those who just love the game. In these settings, there are little or no spectators nor financial rewards for players. In these cases, amateur players rely exclusively on sheer personal determination and talent to produce high-performance play. The problem is, levels of determination fluctuate, and when levels are low, where does determination come from? On days when the will to run and kick the ball through defenders whose purpose is to prevent success, it may be necessary to seek assistance external from the self. Fortunately, professional soccer players have the luxury of fans who readily provide passionate encouragement any time.

The club’s fans are doing what I truly believe educators and parent should do more of. We must constantly provide the cheers necessary that encourage success. Furthermore, we need to
OpEd: Soccer by Daniel Gumarang, Continued

provide the same level of motivation and encouragement when student engagement and interest are low and especially at times when they are not successful. In practice, many of us are guilty of low expectations. Imagine if soccer fans actually believed that players are incapable of making a goal? Some of us instantly stop encouraging when students fail. While consequences should be appropriate, students who are not successful are less likely to try again for they do not feel safe to do so. We know there are students who experience this as they are often castigated, scolded and made to feel bad when they fail to achieve. What are the chances of those students making another attempt? Again I make a parallel to soccer fans. If fans booed a player after failing to score, what is the incentive to do it again? Watching a soccer match at Maracanã, I made an important connection between a game and the work of educating children. Prior to leaving, I was asked, “What can you possibly learn in Brazil that would make you a better administrator in Los Angeles?” This article is an attempt to share my learning. Like soccer fans, good teachers will do just about everything to cheer and encourage their students to succeed. The best educators (and parents) will do the same even if the student was not successful, just like the fans who continued their hoots and cheers after the player missed the goal.

Journal of Mathematics Education at Teachers College

The JMETC is a re-creation of an earlier publication by the Teachers College Columbia University Program in Mathematics and Education. As a peer-reviewed, semi-annual journal, it is intended to provide dissemination opportunities for writers of practice-based or research contributions to the general field of Mathematics Education.

Each issue of the JMETC will focus upon an educational theme. Themes planned for the 2010-2011 issues are: Teacher Education, International Education, Curriculum, Technology, and Equity—all centered upon mathematics and its teaching. The JMETC will have a distinctive niche in the world of education publishing. Our readers are educators from pre K-12 and college and university levels, and from many different disciplines and job positions—teachers, principals, superintendents, professors of education, and other leaders in education.

Check it out online at: www.tc.edu/jmetc
Faculty, Adjunct, Student and Alumni  
Publications


Blumberg, K. (2010, April). Collaborating with Google apps in the 21st century classroom. Presentation and workshop at the annual meeting of the National Association of Laboratory Schools, Muncie, IN.


Lowes, S. (2009, November). Developing a framework for looking at group work in asynchronous online...
courses. Paper presented at the Virtual School Symposium of the North American Council for Online Learning, Austin, TX.


Mensah, F.M. (2010, March). *Research into practice: Practice informing research for equity scholarship and teaching.* Equity & Ethics Committee Pre-Conference Workshop, NARST Annual Conference, Philadelphia, PA. (Interactive workshop with guest speakers, break-out sessions, and Q&A session with emphasis on conducting equity research, networking and establishing oneself as a researcher.)

Mensah, F.M (2010, April). *Positional identity as a lens for connecting elementary teachers to science teaching in urban classrooms.* AERA Annual Conference, Denver, CO. (Interactive poster session, Identity construction in learning and teaching science in- and out-of-school K-12 contexts: Multiple perspectives; Maria Varelas, organizer.)

and teacher educators through digital storytelling: Insights, challenges and possibilities. Paper presentation at the 59th National Reading Conference. Albuquerque, NM.


**Presentations**


Li, D., Black, J. B., Lu, C., Kang, S., Han, I., (2010, April). “It’s obvious to tell why it is!” – A study of improving students’ understanding in physical science concepts via robot-based hands-on learning activities. Paper presentation at the annual meeting of the American Education Research Association, Denver, CO.


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