Self-Reflection
Clinical Scholarship

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Across the world there is a clamor for the improvement of teaching K-16. The professional development of teachers is vital to realizing these improvements (Blunck, 1993; Blunck & Yager, 1990). The latest Carnegie Challenge paper, *Teaching as a Clinical Profession: A New Challenge for Education* (deCourcy-Hinds, 2002) speaks to this idea and the need for the creation and testing of innovative clinical approaches to teacher education.

Unfortunately, models for professional development have changed little in spite of the many educational reforms occurring throughout the world. Teachers and teacher candidates can often be heard lamenting the "sit and get" inservice experiences and methods courses that they are required to take. The teachers' laments are universal and speak to the lack of relevancy and usefulness of the experiences in terms of helping them grow, develop and succeed.

We often fail to realize that effective professional development is human capacity building that requires ongoing support, collaborative planning, delivery and evaluation. The driving question that has been at the center of my clinical scholarship for the past fifteen years is…what types of professional development experiences result in:

- mastery of subject matter competency;
- understanding and use of the basic features of science and mathematics;
- confidence and enthusiasm for teaching;
- ability to use constructivist practices;
- ability to adapt curriculum materials to Science/Technology/Society (STS) active teaching approaches?

My belief is that the teacher professional development continuum spans both the preservice and inservice arenas. And so, my clinical scholarship has included both practicing and emerging teachers. My scholarship is action oriented. I view myself as a co creator and innovator working collaboratively with teacher candidates, K-12 teachers, school district leaders, community and business leaders, and university faculty to help them deal more effectively with the situations they face or will face on a day-to-day basis. As an assistant clinical professor, my primary responsibility is centered on helping teachers translate research into practices that help all K-16 students achieve at higher levels.

My clinical scholarship efforts have been focused on building model programs and processes for ongoing science and mathematics teacher development across K-16 levels. Most of my published work has not been in refereed journals but rather done, often by invitation, in books and journals designed to be resources for teachers or teacher educators (See CV – Publications Section). My scholarly achievements include the development, implementation and dissemination of professional development programs such as The Iowa Chautauqua Program (ICP) (1997-1995), The Egyptian English, Science, and Mathematics Teacher Leadership Program (1997-2002) and The Advanced Placement (AP) Environmental Teacher Leadership Development Program (1997-1998), working as a teaching mentor with college/university faculty, as well as the development of a model constructivist curricula for the UMBC elementary science methods courses (1995-present). Some of the teacher development programs that I helped engineer have received national awards for excellence and have been supported at both the state, national and international levels. These awards include:

2001 – Promising Practices Award/Northwest Regional Educational Laboratory (awarded to The Iowa Chautauqua Program (ICP))

1999 – Award for Excellence: Non-Degree International Professional Development Programs – University Continuing Education Association (awarded to The UMBC Egyptian Teacher Leader Program (ETLP))

1994 National Diffusion Network (NDN) Endorsement of Excellence (awarded to The Iowa Chautauqua Program (ICP))

There were opportunities to use insights and understandings gleaned from my scholarly work in Iowa when I arrived at UMBC The opportunity waiting when I arrived, was to work as a UMBC faculty team member with The NSF Maryland Collaborative for Teacher Preparation (1995-1999). After spending nine years improving science teaching at the K-12 levels across the country, it was exciting and appropriate to take on the challenge of transforming teaching practices in university science and teacher preparation courses at the undergraduate and graduate levels.

As a team member I served as Co-PI for the UMBC/MCTP campus subcontract and a faculty representative to MCTP that stimulated collaboration among Maryland teacher preparation institutions' science, mathematics and education faculty in order to build constructivist-based courses for elementary/middle school science teacher preparation. MCTP also involved students in science and mathematics research through summer internships. Georgia Dendrinos, one of the UMBC summer interns was selected as an MCTP outstanding intern for her research on artificial substrates in the Chesapeake Bay and her plans to involve middle school students in the same research topic.

From 1995-1997, as part of the UMBC/NSF-MCTP program, I served as a clinical teaching coach and action research partner with Dr. Phillip G. Sokolove, UMBC Professor of Biology. We worked together to integrate STS active learning strategies into BIO 100; attempting to help him move away from the teacher-centered lecture approach he had been using for 25 years. I observed each class of his BIO 1000 introductory biology course for one year

and intermittently for another year. During the first year, I provided clinical feedback on an as needed basis with focused weekly debriefing sessions. During these weekly clinical coaching sessions we made adjustments to the curriculum and instructional approaches.

Research that emerged from this clinical mentoring experience was presented and published as part of NSF/MCTP and The College/University Chautauqua Program. The publications and presentations that resulted from the research were:

> Sokolove, P.G., Blunck, S.M., Flaim, D., & Sinha, B. (1998). Active learning vs. traditional lecture approach in introductory college biology. In Robinson, J.B. and Yager, R.E., Translating and Using Research for Improving Teacher Education in Science and Mathematics. (pp.109-114). Washington, DC: The US Department of Education.
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> "Reform in Undergraduate Biology: Comparison Study of Exam Performance in Biology 100 at The University of Maryland Baltimore County," National Association of Research in Science Teaching, Annual Research Conference, San Diego, CA. April 1998.
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> "Transformations in Undergraduate Biology: Biology 100 at The University of Maryland Baltimore County," The University of British Columbia, Vancouver, Canada. August 1997.
>
> "Active Learning in Undergraduate Biology at University of Maryland Baltimore County." – Maryland Collaborative for Excellence in Teacher Preparation (MCTP) State Outreach Conference, Baltimore, MD. January 1997.
>
> "Rethinking Undergraduate Biology: Biology 100 at University of Maryland Baltimore County." – National Science Teachers Association: National Convention, St. Louis, MO. March 1996.

This collaboration was especially significant in that only a few science professors/science educators were attempting to systematically transform undergraduate science instruction. This was especially true for science teaching in large lecture settings. The comparison study that resulted from this collaboration was one of only a few being done in the country at that time. Since then, Dr. Sokolove has gone on to receive additional funding from The National Science Foundation based on the pilot comparison study that we did together and has received the highest

honor that The University System of Maryland (USM) awards for excellence in teaching. The improvements in science teaching resulting from this clinical partnership appear to be significant and lasting.

In the spring of 1997, UMBC received a grant from The Egyptian Cultural and Educational Bureau and The Egyptian Ministry of Education to support mathematics and science teachers as part of The Egyptian Teacher Leader Program (ETLP). The Egyptian Teacher-Leader Program (http://www.umbc.edu/egyptian) is a collaborative effort between The University of Maryland, Baltimore County (UMBC), The Egyptian Cultural and Educational Bureau and The Egyptian Ministry of Education. As Co-PI and co-designer of the program, I am responsible for the ongoing development and implementation of the mathematics and science academic curriculum (set of 5 courses and K-12 school visitations) for this program (See http://www.umbc.edu/egyptian/model.htm). Egyptian English teachers are involved in the ETLP as well. Dr. Jodi Crandall, Professor, UMBC Department of Education, serves as the Co-PI and academic leader for the English component of the ETLP.

Additional Co-PI responsibilities with ETLP include facilitating work of all faculty/staff connected with the program and Ph.D. and masters level graduate students (total of 4 students/year).

The ETLP is a professional development experience that connects and integrates key aspects of English, mathematics and science with program improvements in education. The hope is that this program will stimulate and foster lasting alliances among teachers, schools, universities/colleges, and communities for continued communication and cooperation with the common goal of improving English, mathematics and science education. This program respects and nurtures the intellectual capacities of the teacher-leaders and others in the school community

as they work together to create mathematics and science education programs that are meaningful for all students.

Research and publications are emerging on the effectiveness of the program. One dissertation has been completed (*The Process of Intercultural Adaptation of a Group of Egyptian Scholars in the United States: Issues of Adaptation and Intercultural Stress*, Sandra Lopez-Rocha) and one is in progress (*Exploring Teachers Beliefs in Teaching English to Speakers of Other Languages (TESOL): Case Stories of Non-Native Teachers' Use of Internet Technology in the English as a Second or Foreign Language Classroom,* Silvio Avendano). There is a book in preparation and several professional presentations on the program have already been done with more scheduled for spring 2003 research conferences. The book (Blunck, S.M., McElderry, K., and Perez, M. (in preparation). Educating World-Class Citizens: The Egyptian Mathematics and Science Teacher Leader Program.) that is in preparation will contain case stories of the Egyptian teacher leaders and essential ideas intended to guide development of international teacher development programs. Co-authors on this book are graduate students who have taught in the program. Key benefits of the program reported in publications and presentations and found in The Egyptian Executive Summary (http://www.umbc.edu/egyptian).are listed below.

As we move forward with the ETLP, there are plans to redesign the program to include more in-country work with the teachers and administrators in Egypt. We have been invited to provide a proposal to The Egyptian Ministry of Education, for building stronger regional networks across the 27 Egyptian states. The model we are proposing allows for inclusion of additional Iowa Chautauqua components that will build a stronger infrastructure for the program. We are continuing to propose and develop models for distance education components including more videoconferencing and on-line experiences and disseminating information on the program.

There are two additional and significant teacher development projects on the horizon for me. The University System of Maryland (USM) in partnership with UMBC and 2 other Maryland teacher education institutions was awarded (October, 2002) a Mathematics, Science, Partnership (MSP), targeted award for $7,400,000 from The National Science Foundation (NSF) to support the Vertically Integrated Partnership Project . The project targets the Montgomery County Public School high school science teachers and is designed to help them improve science teaching as they implement the new state high school assessments over the next 60 months. The project proposes a comprehensive teacher development initiative that will build leadership capacities in all high school science teachers across the next five years. The project will also identify professors from each partner campus who will serve as content experts and teaching fellows providing ongoing support to the teachers. The professors will learn the best practices in teaching while working with the high school teachers. I helped conceptualize and write this collaborative teacher enhancement project and will serve as the principal investigator of the program on the UMBC campus. The research agenda for this project will result in publications and presentations on K-16 collaboration, teacher action research, systemic change in schools, accountability and assessment, and provide an opportunity to extend my research on communicative and collaborative cultures across K-16 levels.

Additional scholarly accomplishments that I have been involved with since coming to UMBC are:

1999-2000 NASA SeaWiFS Teaching Poster and Teaching Supplement (www.nasa.gov.seawifs) - Teaching resource on ocean remote sensing developed with Jim Acker, one of my secondary science students and Melissa King, one of my elementary science methods students.

2000 The UMBC Egyptian Teacher Leader Video Conference Series: Promising Practices in Professional Development and Teaching Methodologies – Video conference series with The Egyptian Ministry of Education/Egyptian Education and Cultural Bureau

that connected all 27 states in Egypt with teacher leaders studying at UMBC.

1997-present The UMBC/Straus Initiative: Science and Citizenship: Science, Technology, Society (STS) Teaching and Learning at the University Level – A UMBC Professional Development and Teaching Enhancement Project. This project resulted in the creation of a UMBC Certificate Program in The Human Context of Science and Technology.

1997 Co-Director - Combining Resources in Engineering, Science, and Technology (CREST), Maryland Regional Conferences for Science and Mathematics – February 1997, Technology Use In Upper Elementary and Middle School Science – March 1997, Technology Use in Pre-Algebra and Algebra.

1995 A UMBC DRIF Grant: Enhancing Discourse Dynamic in Biology 100 – An internal grant that supporting a comparison research study on student achievement and the purchase of hand-held, wireless microphones for Biology 100 mentoring project. Microphones were used make student discussions more interactive.

My goal for the future is to keep focused on building innovative and meaningful professional development programs for teachers at all levels of practice throughout the world. The scholarly work I have been involved with since coming to UMBC (1995-2002) has, as any scholarly work should, left me with new questions. I look forward to living into the answers to these questions as I take on the scholarly challenges ahead of me.

Please see other file on this CD labeled *Evidence Matrix – Clinical Scholarship* for information and evidence of the scholarship that I have described in this narrative. All materials included in the *Evidence of Scholarship* column of the matrix are hyperlinked – all the reader needs to do is 1) move cursor to document/evidence listed in column, 2) hold down the CTRL button on the keyboard and 3) left click mouse at the same time to view the evidence. To advance the document/evidence once it is opened using this method, use arrow keys or sidebar. The matrix includes information on my scholarship since coming to UMBC in 1995. My curriculum vita includes a complete record of my scholarship.

References:

Blunck, S. M. "Evaluating the Effectiveness of The Iowa Chautauqua Program: Changing the Reculturing Behaviors of Teachers." Unpublished doctoral dissertation, The University of Iowa, 1993.

Blunck, S.M., & Yager, R.E. (1990). The Iowa Chautauqua Program. Journal of Elementary Science Education, 2(2):3-9.

deCourcy-Hinds, M. (2002). Carnegie Challenge 2002: Teaching as a Clinical Profession: A New Challenge for Education. The Carnegie Corporation of New York: New York, NY.