

IF WE BUILD IT BETTER, WILL THEY COME?: A PROPOSAL FOR DOCTORAL SCIENCE EDUCATION

Heidi Carlone

The University of North Carolina at Greensboro

Vexation

Here is a (perhaps only slightly exaggerated) conversation I have more than one time when meeting new professional contacts outside of North Carolina:

Them: What university are you from?

Me: The University of North Carolina at—

Them: (interrupting) Oh, you're from Chapel Hill? Do you know so-and-so?

Me: No, not Chapel Hill, I'm at the University of North Carolina at—

Them: (interrupting) Oh, yeah, in Raleigh!

Me: No, that's NC State. I'm in Greensboro. The University of North Carolina at *Greensboro*.

Then, depending on the person, there may be a conversation about where Greensboro is. In fact, this year, one of the doctoral students I work with went to NARST for her first time. She met a very well-known science education scholar who was formerly at a research university in a mid-Atlantic state, and he graciously engaged her in conversation before a session. When he asked what university she was from, and she replied (UNC Greensboro), he said, "Oh, yeah, that's in the Research Triangle Park!" (The RTP includes Raleigh, Durham, and Chapel Hill). She politely corrected him saying, "No, it's part of the Piedmont *Triad*—Greensboro, High Point, Winston-Salem." In an amused tone (she actually described it as "derisive"), he replied, "So you define that for yourself, huh?"

These kinds of conversations do not really bother me personally anymore; I find them rather comical on one level. My point here, however, is that UNCG is not the first or second university one thinks of when one thinks of NC colleges and universities, especially for doctoral studies. And, that has implications for us as we try to build our science education doctoral program in the Department of Curriculum and Instruction (CUI) where I work. Though I know recruiting doctoral students in science education is difficult at even the most prestigious research extensive universities, places like UNCG face the additional challenge of not having the history and prestige of being a flagship state university. However, I argue that UNCG and in particular, our CUI Department, is poised to be one of the best environments to prepare educational researchers and teacher educators in North Carolina and perhaps in the Southeast. Many of you may read this skeptically, but I am okay with that; I like being the scrappy underdog.

UNCG in context. UNCG is one of the three original institutions of the University of North Carolina system (with NC State and Chapel Hill). It began as a women's college in 1891, where the Department of Teaching (which later became the School of Education), was among the first three Departments of the college. Today, in part because its history, the School of Education (SOE) is positioned as one of the University's gems, highly valued and well recognized for its faculty's contributions to the University's mission as a "student-centered research university". This positioning is unique; at many top-tier universities, SOE faculty are treated as second-class citizens. The recognition the SOE receives is not only legacy-based; it is well-earned. The SOE leads all units in earning external funding, accounting for over half of all University funding. For the past twelve years (through 2007), the SOE ranked in the top 50 in US News & World Report rankings. Apart from the state's Historically Black Colleges and Universities, UNCG is the most diverse university in the NC System, with a 26% minority population that is growing with each freshmen class. UNCG serves a large population of first-generation college students.

The university is ranked by the Carnegie foundation as a research university with high research activity; there is interest, investment, reward, and recognition for faculty research activities. Particularly relevant is the University's recent increasing interest in mathematics and science education. In the past two years, there have been two new Distinguished Professorship developed—one in mathematics education and one in science education. UNCG is leading the effort to develop a multi-institutional Institute for the Advancement of Mathematics and Science Learning. We have hopes for at least one, if not more, additional faculty lines in science education in the next year or so.

The full-time doctoral student cadre in our Department (CUI) is thriving, now at 20 full-time students up from only three when I first arrived in 2000. There are opportunities aplenty for doctoral students' professional preparation, including teaching undergraduate methods, co-leading Professional Development School teams of

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students, supervising student teachers, serving as research assistants, presenting at national conferences, and co-authoring published manuscripts. At the most recent National Reading Conference, our doctoral student representation rivaled many of the top-tier research universities.

Unfortunately, only two of CUI's full-time doctoral students are in science education. I cannot even fill one of two full-time research assistantships I have available for next year (2008-2009), which I find frustrating, given the fact that these kinds of professional research opportunities are rare and sought-after at many research universities. Further, the recently hired Houston Professor of Science Education will likely bring additional funding for full-time RA positions, and my colleagues and I recently submitted an NSF grant that, if funded, will bring three additional full-time RA opportunities. We have all the makings of what could be a very strong doctoral program for students interested in science education. Thus, my major vexation is: *How can I grow the doctoral program in science education?*

Venture

As I now see it, this vexation is multifaceted¹. In part, the accompanying venture demands attention to recruitment issues (how and where to recruit students), but also, to thoughtful program development, including defining the undergirding theoretical assumptions about what makes up a “good” doctoral program in science education. I discuss each of these endeavors below.

Recruitment. I need to develop a plan for recruitment. How and where should I go about recruiting students? Do I first need to pay attention to growing the masters program in science education before I can worry about recruiting students to the doctoral program? What professional audiences should I target? Should I focus energies on recruiting at the state-level, and if so, what might be good venues? I am looking for both practical advice (“here’s how we’ve done it in the past”) and imaginative musings (“what if you...?”) from my fellow Crossroads participants.

Program development. I keep thinking back to David Moss’s Crossroads keynote address in 2005, where he stressed that we act locally or, in his words, “get our own house in order” in thinking about more global problems in science education. My global concern is that science education research is entirely too narrow, drawing on mainly psychological traditions, which offer limited explanatory power that position the responsibility for change on the shoulders of individuals. I worry that graduates from prestigious science education programs who have been trained to view problems in science education through psychological lenses are left reproducing the status quo or unprepared to pull from other disciplinary or paradigmatic traditions. My concern here is mirrored in recent dialogue at the national level about the makings of effective preparation of educational researchers (e.g., Eisenhart & DeHaan, 2005; Labaree, 2003; Shulman, Golde, Conklin Bueschel, & Garabedian, 2006).

So, my desire to recruit doctoral students must go hand-in-hand with thinking about what a program might look like if we did have a larger cadre of students. My venture would be, in part, to develop a course of study, including a reasonable course load and purposeful and diverse professional development opportunities that would enable students opportunities to access a career in science education academia that is respectable (recognized by others in the field as “good work”) and radical (contests status quo ways of doing things in science education).

¹ Thank you to Adam Johnston for helping me see this.