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Developing geographic competencies for careers in higher education, business, government, and non-profit organizations

Abstract: This paper focuses on the projects and strategies developed by the Association of American Geographers since 2002 to build and sustain a disciplinary infrastructure for enhancing academic practice and supporting new professionals. We provide an outline of this broader, discipline-wide effort, but our focus is mainly on the development of practical resources for graduate curricula and professional development programs. Our point is to illustrate how similar resources might be created in other disciplines.

Key words: early career faculty, geography, professional development

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Introduction

For many geographers, the first years of a professional position are the most stressful of their entire career. Having focused for years on refining the research skills needed to complete the dissertation, new faculty often find themselves almost immediately overwhelmed by an array of responsibilities, opportunities, and choices rarely discussed explicitly in their graduate training. Similar concerns are expressed by geographers entering careers in business, government, and nonprofit organizations. Despite recent efforts by many universities, foundations, and disciplines to change this situation, the weight of learning the unwritten rules of professional life remains the burden of the individual. This self-help approach to professional development appeals to some, but all too easily discourages many highly talented individuals who are marginalized by lack of access to the insider knowledge they need to succeed.

This is a situation we have been trying strategically to change. Working through the Association of American Geographers (AAG), we have come to believe that, unless the culture of higher education changes to view professional development as a community-based responsibility, the well-documented problems experienced by many new professionals transitioning into career positions will continue, to the detriment of academic departments, institutions, and disciplines.

By “community-based” professional development, we mean moving away from the self-help approaches that have typified the preparation of future professionals in many disciplines toward more systematic dialogue and sharing of resources involving the full participation of students, junior and senior faculty, department chairs, and academic administrators. Community-based professional development, moreover, recognizes the totality of faculty aspirations, talents, and professional expectations across all types of workplace settings and demographic contexts. Newly hired geographers who are able to identify and quickly meet the expectations for their work are more likely to succeed than those who cannot, and the difference between success and failure is often defined by the amount and type of support received by geographers in their formative professional preparation.

This paper describes the process of developing an infrastructure for sustaining long-term, community-based approaches for enhancing the preparation of professionals in geography. Although we focus on a single discipline, we think the lessons learned are relevant for many disciplines and professional organizations, for two reasons. First, the development process involved a number innovative features which allowed for a more collaborative, grass-roots approach to creating and reviewing resources for higher education and professional development programs. Second, the process might be viewed as a model for how other disciplines can develop and improve materials for early career professionals.

Two AAG projects provide the context of our discussion: the Geography Faculty Development Alliance (GFDA) and Enhancing Departments and Graduate Education

(EDGE) in geography, both funded by the US National Science Foundation. GFDA and EDGE are both intended as broad-based, long-term efforts to change the culture of support for early career professionals in geography, as well as for graduate students pursuing careers outside academia (Solem and Foote, 2009a). The GFDA project (2002-present) concentrates especially on support for doctoral students in the late stages of their programs and for early career faculty who are beginning or in the midst of their first academic appointments by providing summer residential workshops, seminars and workshops at professional meetings, and mentoring and networking opportunities. EDGE's focus includes improving academic practice, but assumes a broader interest in improving professional development opportunities for all graduate students, including those planning to pursue careers in government, business, and the non-profit sectors.

Both projects have involved considerable research into how disciplinary knowledge and skills are applied by graduates as they begin their careers in both academic and non-academic professions, and how graduate programs prepare students for these careers (Solem, Cheung & Schlemper, 2008; Solem & Foote, 2004, 2006; Solem, Lee & Schlemper, 2009). But, it was clear from the beginning of both projects that, to have a lasting impact on the discipline, several things were needed. First, the discipline needed curriculum resources to be developed for the purpose of helping promote change in academic geography programs. Second, more investment was needed to build a cadre of early career professionals equipped with the skills to use innovative materials to support change in those programs. Third, a parallel effort was needed to engage the talents of senior faculty and departmental administrators in the implementation of new professional development programs and curriculum resources. Finally, the backing of the AAG, geography's largest professional association, was a necessary component to ensure continued support, visibility, and development of the projects into the future. In the following discussion, we touch on all of these issues.

The context and vision of the disciplinary effort

Our vision of enhancing professional development rests on an emerging body of research that has highlighted the influence of departmental culture and climate on the experiences and professional development of early career professionals, an influence that much of the available literature has tended to overlook while focusing on the attributes and abilities of individuals. Yet, as we and others have discovered in our research with students and faculty, there is little consistency in the ways various graduate programs prepare individuals for careers. Some departments and institutions offer structured mentoring programs and certificate programs. Others provide graduate students with opportunities to develop grant proposals and guidance on academic publishing. Still others offer internship programs linking the graduate curriculum with community service or work with private and public sector employers. But few graduate programs do all of these things, leaving many students underprepared for a variety of job responsibilities. Compounding this situation are the internal relations in some departments that result in "chilly" climates, difficulties for "underrepresented" colleagues such as women and ethnic minorities, divisive politics, and bitter infighting that can marginalize individuals from each other and departments from the broader academic community on campus and

beyond. Even the most talented scholars find it difficult to do good work, let alone persevere in such conditions.

The good news is that there seems to be growing recognition across academia of the need to change approaches to higher education in ways that extend the timing and scope of professional development. As an illustration of change within a particular discipline, we would like to present the case of geography.

Preparing geographers for careers in higher education

In April 2008, Pearson Prentice Hall published two books stemming from GFDA and EDGE: *Aspiring Academics* (Solem, Foote, and Monk 2009) and *Teaching College Geography* (Solem and Foote, 2009b). Although excellent professional development materials exist for early career faculty, our experiences with GFDA and EDGE convinced us of the need to develop some new materials, for six reasons. First, we wanted to establish a different range of topics than was available in some of the existing career guides and, especially, to create a balance among material focusing on teaching, research, and other professional responsibilities. While many books on faculty development focus on teaching and learning issues, and while others concentrate on research and publishing, we sought to adopt an approach somewhat like crossing Boice's *Advice to New Faculty* (2000) with McKeachie's *Teaching Tips* (McKeachie and Svinicki, 2006) or like Reis's book for engineers, *Tomorrow's Professor* (1997). This meant combining the strong, research-based guidance offered by Boice about balancing the many competing demands of academic work, with the more extensive, expert advice offered by the team of writers whom now contribute to McKeachie. Other volumes, such as those by Caplan (1993), Darley, Zanna & Roediger (2003), Deneef and Goodwin (2007), Garcia (2000), Goldsmith, Komlos & Gold (2001), Hall (2002), Lucas & Murry (2002), Lyons, Kysilka & Pawlas (1999), Schoenfeld and Magnan (1994), Toth (1997), and Wankat (2002) touch on many of the same broad issues as Boice but do not, in our view, pay quite enough attention to issues of teaching and learning--one of the major sources of stress for early-career faculty. Certainly a range of excellent, popular books on teaching and learning issues are also available, such as those by Angelo and Cross (1993), Fink (2003), Roysse (2001), Walvoord and Anderson (1998), Wiggins (1998) and Wiggins and McTighe (2005). But, again, we wanted the message of our books to be one of balance and moderation and wanted neither the materials on teaching and learning to overpower other important topics, nor the material on research and publishing to be viewed in isolation from other areas of academic practice.

Second, we saw value in developing discipline-specific professional development materials. There are special challenges in most disciplines that are most fruitfully addressed by disciplinary peers (Becher, 1989; Healey, 2003; Monk, 1998, 2004). In geography, some of these issues revolve around its position spanning the natural and social sciences and even the humanities. In teaching, signature practices in geography have emerged around: 1) the importance of field study and fieldwork in both the undergraduate and graduate curricula; 2) the widespread use of laboratory sections for teaching both physical geography and geographical research techniques such as

geostatistics, cartography, and geographic information science (GIScience); 3) the extensive use of technologies for mapping, GIScience, and web-based instructional materials; and 4) the critical value of developing among students a global perspective on social, economic, environmental, political, and cultural issues.

At the same time, we see discipline-specific materials as complements to other interdisciplinary resources, rather than substitutes. That is, we see the value of interweaving intra- and interdisciplinary approaches to professional development. We have chosen in GFDA and EDGE to focus on professional development among faculty and within graduate programs and professional associations, but we see our efforts as necessarily supportive of and supported by the efforts of other stakeholders. Many colleges and universities provide excellent programs, workshops, internships, seminars and certificate programs on career topics for graduate students and early career faculty. We concur with other researchers that these sorts of university-wide efforts benefit from cross-cutting discipline-specific professional development opportunities (Brown, Clark, & Bucklow, 2002; Clark et al., 2002; Healey & Jenkins, 2003; Jenkins, 1996). Some examples of these types of discipline-specific materials include those developed in sociology (American Sociological Association, 2008), the geosciences (National Association of Geoscience Teachers, 2008) and psychology (Darley, Zanna, & Roediger, 2003).

Third, we sought to use the project as a way to raise awareness of professional development issues within geography and build a community of support within the discipline. As noted earlier, in many disciplines the responsibility for professional development is still placed almost exclusively on the individual and new faculty are generally left to "go it alone" in their first few years. Yet, research seems to indicate the key roles played by departmental, institutional, and disciplinary communities in shaping the experiences of early career faculty. In our work with geography programs through GFDA and EDGE, we have observed this self-help view of professional development gradually giving way to a sense of shared responsibility. We wanted to develop materials that would help to sustain this sort of shared commitment to professional development by involving a wide range of participants from graduate students to senior faculty.

Fourth, as part of this community-building activity, we wanted to provide a wealth of materials which could be easily employed in workshops, seminars, brown-bag lunches, and other settings, as well as a way for these materials to be adapted, improved, and expanded through time. Only a handful of graduate geography programs go beyond the basics in addressing professional development in their curricula. Issues relating to research and publishing are usually covered very well, teaching and learning a bit less so, and many other issues such as time management, collegiality, and ethics are rarely addressed. Although we wanted *Aspiring Academics* and *Teaching College Geography* to serve as textbooks in departments where graduate seminars on professional development issues are already being offered, we also wanted to offer a range of materials which could be easily used within other courses to address particular topics like research ethics, publishing, grant writing, or approaches to teaching and building relationships that are inclusive of the diversity of students and colleagues, as well as

suitable for other out-of-class settings and particularly informal ones including those organized by students. We were anticipating that many of these topics would be new to graduate students and faculty alike, so wanted to provide materials that could be used with a minimum of preparation, were relatively self-contained, and could be easily edited and modified. This suggested preparing some materials that could be distributed in the web.

Fifth, more than just distributing online materials, we hoped to create a more dynamic online community--a website which could promote exchange and interaction among users, as well as the sharing of new and improved materials. Research indicates that networking and mentoring are very important to early career development--particularly networking that goes beyond a person's immediate department colleagues and peers. We wanted to use these new books to help build this sort of online community, one in which participants could share their concerns and ideas.

Sixth, we wanted the materials to be rigorously peer reviewed to make sure both that the authors were drawing on the latest research and developing activities that would be of the widest possible value. We were aiming as well for a broader perspective sensitive to how much of the academic career track can vary by department and institution type for men, women, faculty of color, and international faculty born abroad who now account for almost a third of US geography faculty. At the same time, we wanted to avoid the problem of trying to address audiences across too many disciplines, as there are important differences in career paths across the arts and humanities, sciences, and engineering fields.

Preparing geographers for careers in business, government, and nonprofit organizations

In economically turbulent times, many students and college graduates will likely be wondering what options they have at their disposal. Is it time to jump into the job market, or is graduate school a better option? Indeed, many geography departments are hearing from students who are curious about advancing their career options and the value of an advanced degree in geographic information science for future employment. Fortunately, even in difficult times, geography students still enjoy growing opportunities to pursue geospatial work in business, government, and non-profit organizations where spatial, environmental and interdisciplinary skills are needed. Having strong academic preparation in geography will only expand the career opportunities available to students, allowing graduates to enter the job market at a higher level, and to advance more rapidly through the ranks after being hired.

Within the past few years a number of studies by in the U.S. and the U.K. have addressed the issue of "employability", a term describing the readiness of an individual to obtain and then maintain employment (Mistry, White, and Berardi 2006; Donert 2007; Solem, Cheung, and Schlemper 2008). All of these studies point to some important findings. First, hundreds of employer organizations across a broad swath of the business, government, and nonprofit (BGN) sectors seek individuals who are able to think spatially and use geographic technologies to collect, integrate and analyze data on

social and natural systems. And the good news for job seekers is that these same employers forecast an increasing demand for these abilities in the coming years.

A second important finding is that employers view geography education as an essential component of professional development for many BGN careers. This is because geography offers the conceptual frameworks, spatial science foundations, interdisciplinary perspectives, and spatial thinking skills underpinning effective use of GIS and related mapping technologies. In the experience of the employers surveyed and interviewed in this research, geographic learning through field studies, internships, and academic coursework enhances the work of geospatial professionals and helps ensure that the analytical power of geographic technologies is tapped productively.

Employers are also reporting broad and growing professional opportunities for geography graduates in areas as diverse as environmental management, transportation, public health, and international trade. Here, too, there are opportunities for geography professionals to enhance their employability by taking advantage of new models of graduate education such as professional science master's degree programs, which integrate management training and internships with geography education. Among the many such programs are the new Professional Master's Program in geography at Temple University, and similar Masters Degree and certificate programs in Geographic Information Science offered by universities ranging from Arizona State University to Penn State University, and dozens of others. The *Guide to Geography Programs in the Americas* provides detailed overview of these educational opportunities (available at www.aag.org).

Many employers still report difficulties finding qualified graduates possessing strong preparation in geography and spatial analysis. One of the larger challenges identified by the AAG's EDGE project is the need to better align curricula with students' career aspirations and the needs of employer organizations. This is especially true in doctoral programs where PhD students who once aspired primarily to careers in the academy are now often attracted to equally rewarding and socially engaged careers in government, nonprofit organizations, and businesses. Departments in which the M.A./M.S. is the highest degree offered demonstrate clearer understanding of student goals and curricula that address BGN opportunities, but these programs still face challenges of implementation and helping students make transitions from traditional academic preparation.

The greater attention now given to BGN career preparation in geography graduate programs also holds promise for recruiting and retaining more women and minority students. This is because many of the students surveyed, including women and minority students, are especially interested in BGN careers, yet often feel that many purely technical graduate programs do not adequately provide them with the career advising and broader educational foundation they see as important to success. But throughout the educational and career pipeline, students, parents, and teachers all need more information about the wide variety of geographic career options available, and the preparation required for success in these careers.

Given that context, the AAG has identified broad areas of critical data needs and actions for future work so that future graduates have a clearer sense of the opportunities available to them:

1. Better data on the geographic and general skills that graduates employed in BGN positions use in their daily work;
2. Local, regional, and national estimates of employers' demand for geographic and geospatial skills in different types of BGN organizations;
3. Comparisons and assessments of the undergraduate and graduate curricula in geography for preparation in BGN careers;
4. Continued development of disciplinary infrastructure to enhance graduate advising, career preparation, and transition support for early career geography and GIS professionals in BGN organizations, modeled after the success of recent National Science Foundation funded programs such as the GFDA and EDGE projects.

These research issues will be pursued in the second phase of the AAG's EDGE project, which was extended for three years with a \$993,031 grant from NSF awarded in August 2009. In addition to pursuing these research issues, EDGE-Phase 2 will develop resource materials to enhance BGN career preparation, including a book publication similar in design to *Aspiring Academics*.

Engaging the full discipline

Equally important to the goal of building a disciplinary foundation for professional development are programs aimed at marshaling the leadership skills and capabilities of the heads and chairs of academic departments. Not only is strong departmental leadership important for acquisition of resources for new faculty, but research shows that early career professionals who perceive their department chairs to be supportive are also more satisfied and happy with the overall working environment. Furthermore, supporting new scholars is fundamental to the health of every academic department because an engaged, capable faculty is essential for achieving important departmental goals such as strategic planning, achieving growth in student enrollments, securing external funding and other financial resources, establishing effective working relationships with other departments, documenting student learning outcomes, among many other issues.

These are some of the reasons why the AAG has established a Healthy Departments Initiative to provide coherent and practical guidance for strengthening departmental leadership. Through regular and sustained communications with department chairs, the Healthy Departments Initiative promotes awareness of how investments in faculty development will ultimately result in higher levels of collegiality and commitment among all members of a department to participate in a shared vision of implementing change.

An additional approach to engaging our constituencies involves organizing professional development sessions and workshops at AAG regional and annual meetings. Many of these sessions and workshops have been planned by graduate students and early career faculty, and attendance has been impressive. Student-led organizations such as the AAG Graduate Student Affinity Group and the Supporting Women in Geography groups are advising our outreach efforts, and in doing so participate directly in our efforts to promote change in the discipline.

Conclusion

In sum, the AAG's approach to supporting new professionals focuses especially on developing opportunities among undergraduate and graduate programs, students, and faculty, but views the efforts of department chairs and college and university administrators as vital for achieving long-term change that enhances the work of future stewards of the discipline. Although the dividends of our efforts may take years to manifest, we have observed considerable interest and widespread recognition that more and better professional development is vital to geography – and that the time has come to make this a priority shared by the full disciplinary community.

For further details about the AAG's professional development initiatives, please visit www.aag.org.

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