EDITORIAL PREFACE

Mentoring Gaming and Simulation Graduate Students for Life Outside Academia (Part II)

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I stated in the editorial for IJGCMS 1(4):

In IJGMS, we publish articles that are the result of research studies. They are the final products of our work, and they don’t necessarily always reflect the processes that we go through as researchers and educators. It is my hope that future issues of IJGMS will include authors who share more specific strategies for the various programs within the broader area of games and simulations. (Ferdig, 2009, p. IV).

I also thanked Dr. Kara Dawson for our lengthy conversations about this topic. Much of our discourse, agreements, and questions have found their way into our other publications and into our academic programs. Given the positive response of the editorial as well as my call for future such examinations, I invited Dr. Kara Dawson to reflect with me further about additional strategies for thinking about the positive enculturation of students into existing communities of practice.

UNDERSTANDING MENTORING

In a perfect academic world, mentoring could be facilitated by a number of factors. Faculty would get mentoring training in their graduate programs and as assistant professors. Intrinsically-motivated students would enroll, and these students would have interests that would be directly related to the interests of the faculty. Faculty-to-mentee relationships would be kept to a minimum in order to encourage collaboration and participation. Academic rewards such as tenure, promotion, and merit would be correlated to successful mentoring.

Unfortunately, it is not a perfect world; as such, we need strategies to assist in mentoring our future colleagues. We concur with those who argue that the doctoral experience falls within the early career phase (Austin, 2002), later followed by mid-career and then senior level. Thus, the suggested strategies are based upon our desire to have our doctoral students learn through an apprenticeship model (Brown,
Collins & Duguid, 1989) in which they take legitimate peripheral participation (Lave and Wenger, 1991) in the Educational Technology community from the beginning of their program.

The strategies presented in editorial parts I & II represent some of our efforts to operationalize such participation. The first three strategies represented generic enculturation strategies via composite mentoring, writing teleographies and developing scholarly identities. These generic strategies help students establish a support community of more knowledgeable others, set goals for their participation in the community and identify their particular niches within the community. The remaining strategies presented here provide strategies for helping students participate in relevant work related to teaching, research and service. We refer to these as task-specific enculturation strategies.

It should be noted that we are viewing mentoring as a process that faculty engage in, either as mentors or as mentees. Some might argue that a ‘true mentor’ is not someone that can be assigned; it is dually-chosen by the mentor and mentee for a number of reasons or factors. It develops over time and has trust as the basis of its creation and evolvement. We are not suggesting that these strategies will automatically lead into a life-time trust relationship with students; we are, however, offering these as successful, mentoring tools. Mentoring is therefore continually defined in this piece as scaffolding students’ development and enculturation into the Educational Technology community of practice.

TASK-SPECIFIC ENCULTURATION STRATEGIES

Conducting literature reviews. Quality literature reviews provide the foundation for strong research studies (Boote & Beile, 2005). Such literature reviews require high levels of cognitive processing and the ability to synthesis and evaluate multiple readings into a coherent document. Yet, many doctoral students have never written papers that move beyond the comprehension level of Bloom’s taxonomy (1956). We attempt to resolve this issue by scaffolding initial literature reviews and promoting reflective activity via a research log early in our program (see Table 1). It is probable that students’ research interests will change but requiring students to immerse themselves in a structured literature review early provides the foundational skills necessary for them to explore additional areas independently in the future.

Authentic Audience Projects. One of the goals of many Educational Technology graduate programs is to help students combine cutting-edge technologies with educational theory to creative innovative learning environments. In a theoretically ‘perfect’ class, the technology skills they learn enable the pedagogic approaches; the pedagogy and theory are instantiated and exemplified in the tool and the tool use. This is obviously easier said than done.

The use of authentic audience projects can support these efforts. It is a rather basic notion that many of our courses are project-based. The projects help students use existing tools and theoretical perspectives while creating something useful. However, they must have a real audience for their work. The audience could be a classroom teacher, someone in industry, or a faculty member. In addition to providing authenticity and ownership, students leave the class with an artifact to add to their professional portfolio—all while helping someone else.

Examples of authentic audience projects from our work have included design, development and evaluation of online modules to teach a new pedagogical concept to medical educators, design, development and evaluation of a unit of instruction focused on teaching mathematical skills to at-risk students via media creation, and work with professional development experts to create an online community of practice for aspiring professional development leaders.

Such authentic audience projects provide students with tangible examples and experiences related to the notion of engaged scholarship (Boyer, 1996). Students learn to understand the bridge between research, teaching, and service. It also helps broaden their composite mentoring
network as they meet new faculty, community, and industry members. It lets students experience mentoring as they work with faculty and other students (Koehler, Mishra, Hershey, & Peruski, 2004). In addition, many authentic audience projects involve interdisciplinary collaboration. This type of collaboration is essential in the 21st century because the complex problems impacting today’s world requires creative solutions by individuals with different areas of expertise who are able to effectively communicate and collaborate (Klein, 2005).

**Collaborative Writing**. Even good writers need to learn the genre of academic writing. A strategy that has worked well for us is a three-step process. The student works with a faculty member(s) as a co-author on a piece. A second collaboration lets the student take lead authorship, leaving the third piece for sole authorship for the student. Faculty do not necessarily have this many pieces for students to work on, but students often do. Students spend a tremendous amount of time in classes writing products that go nowhere when the class finished. We encourage students to visit faculty in related areas to seek their collaboration in writing once the class is over. The student receives mentoring while the faculty member has the opportunity to publish with the student and support writing development. This strategy provides an opportunity for faculty to discuss publishing and readership. Students need to understand that some publications are peer reviewed, some editor-reviewed, some research-based, and some aimed at a practitioner’s audience. Faculty need to help students realize there is a time and place for each type of writing; a complete CV should include multiple outlets.

### Table 1. Developing literature reviews according to Bloom’s Taxonomy.

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<th>Step</th>
<th>Goal</th>
<th>Level of Bloom’s Taxonomy</th>
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| 1    | Identify an area of personal interest in the field  
Conduct an initial search of the literature.  
Show and discuss your initial “log” with colleagues. | Knowledge & Comprehension |
| 2    | Continue with Step #1 and apply knowledge gained to specify a topic for exploration. The topic should be broad enough to warrant exploration but narrow enough for you to develop a decent comprehension within a semester’s time.  
Turn in a one-page description of and rationale for your topic and be prepared to share it with your colleagues. Be prepared to share your “log” as well. | Application |
| 3    | Determine criteria you will use to identify salient references. Write this criteria in a manner that will guide you and be understandable to others.  
Create an annotated bibliography in which you summarize and analyze relevant articles related to your topic. Doctoral students should create this bibliography using a reference manager such as EndNotes or RefWorks and should begin a keyword system within it.  
During this time you should also begin to synthesize your findings in your “log.” | Analysis |
| 4    | Synthesize your literature search into a literature review. Use Boote and Beile (2005) to help guide your work. | Synthesis and evaluation |
| 5    | Critique your final product as well as the products of no less than 3 of your colleagues using the modified rubric we from Boot & Beile (2005) developed in class. | Evaluation |
It is also important for doctoral students to learn to write with peers so some of our seminar classes provide opportunities for the class (typically 6 – 8 students) to jointly author a paper. The students take the lead on selecting a topic and a journal to which they want to submit while the faculty member provides guidance when needed or requested. Since most of these papers are written within a semester’s time, they are typically conceptual in nature but doctoral students have an opportunity to experience the trials and tribulations of collaborative authorship.

Finally, it is important for students, particularly those interested in jobs at research-focused universities, to have experience with grant writing. While most doctoral students are not in a position to serve as a Principal or Co-Principal investigator (and some funding agencies do not even allow for this), they should have the experience of contributing to a grant writing team. When structured correctly, this can lead to a win-win situation in which the doctoral student gains grant writing experience (and possibly a Research Assistantship should the grant be funded) while the lead faculty member(s) have another smart mind contributing to the team.

While most doctoral students are receptive to collaborative writing, some are not. In these cases, it is important to try to instill the importance of collaboration and evidence of collaborative ability when on the job market. The days of professionals spending hours a day working alone is not indicative of the 21st-century reality in academia, business or industry.

Provide teaching opportunities. Teaching is a core component of academic life and the need for both online and face-to-face teaching experiences has escalated in recent years. In fact, applicants without teaching experience are often not competitive for faculty jobs. Yet, students do not always get the formal opportunity to teach. However, there are at least four ways that faculty can mentor students in teaching. First, students can be invited to ‘own’ a week of a course, taking responsibility for selecting the topic, the readings, and the assignments, as well as leading the discussions. Second, faculty can adopt an evolving syllabus. In other words, instead of dictating every reading for the course, faculty can leave open weeks for students to help decide the content that meets course goals. Third, in research institutions with service courses taught by doctoral students, students can be invited to participate in the refinement of the courses each semester. Finally, new online programs often offer shorter professional development courses or credit courses that can either be audited or co-taught by the student. Auditing gives students insight into student-teacher relationships; co-teaching gives supervised responsibility to the student. Regardless of the format and scope of the teaching experience, doctoral students should leave their universities with the ability to dialogue about teaching in both theory and practice. In particular, our recent experiences suggest faculty search committees are looking carefully at knowledge of online teaching. We have found Karen Swan’s brief piece published by SLOAN-C (2004) and Chico State’s Rubric for Online Instruction (2003) particularly helpful for doctoral students wishing to get started in online teaching and learning.

Provide service opportunities. Service opportunities are often overlooked in doctoral education yet represent a substantial amount of faculty time (Cook, 2001). Providing opportunities for doctoral students to serve in the university and the profession is an important part of the mentoring process. We provide opportunities for our students to serve on search committees and as student representatives on departmental, college or university committees. Our students have been particularly active in our college’s Student Alliance for Graduate Education (SAGE). Graduate students run organizations such as this provide a graduate student voice within the College and support professional development and local conference opportunities for graduate students.

In addition, we encourage students to apply to be reviewers for journals, conference proposals and grants. Obtaining reviewer status often requires extensive experience and credentials but many editors and conference organizers welcome the perspective of graduate students
Learning to mentor is a critical issue; it is one that has received attention from professional associations (Association of American Universities, 1998), philanthropic organizations (Carnegie, Kellogg, Pew) and scholars (Jacobi, 1991; Kram, 1988; Golde, 1998; Austin, 2002). While mentoring is a context-free concept; it is critical that each discipline consider mentoring strategies in light of the nuances of their discipline (Austin, 1990; Tierney, 1990).

Yet, Davis and Fiske (2000) report that many doctoral students are not carefully supervised, receive minimal guidance for academic careers and even less guidance about non-academic careers, and lack focused, regular feedback and mentoring. There are always exceptions as a recent tribute to Peter Lyman demonstrates (Boyd, 2007) but, in general, mentoring needs more attention. The strategies presented in this paper are by no means exhaustive but combined with the strategies presented in the previous editorial (Ferdig, 2009), provide a starting point for dialogue about mentoring doctoral students in Educational Technology.

**CURRENT ISSUE**

As I have stated in IJGCMS 1(4), we publish articles that are the result of research studies. They are the final products of our work, and they don’t necessarily always reflect the processes that we go through as researchers and educators. Readers will notice future issues of IJGCMS that include authors who share more specific strategies for the various programs within the broader area of games and simulations.

This is the second issue for our second year of publication. In this issue, we have 3 exemplary articles that are both empirical and theoretical in nature. The first article is about a project working with preschoolers—an age group that has not received a tremendous amount of attention in the gaming and simulation literature. Using the Wii, Bryant et al. examined physical and cognitive abilities of preschoolers in the context of motion-based game play. The findings produced both expected and unexpected outcomes. For instance, Bryant et al. found that the physical mechanics of pushing both A & B buttons on the Wii remote was hindered by their hand size. However, they also found that even if a game was too complex for the age range, the subjects still enjoyed participating. Their research article includes multiple findings for teachers, parents, and developers.

The second article is by Frapolli et al.; it examines computer-enhanced board games. The authors argue that game board design has mainly been focused on user interaction and look-and-feel. The authors argue that focusing on the flexibility of traditional board games as well as the advantages of the digital world can lead to more successful game design. In this article, the authors present a FLEXIBLERULES framework to help others model board games.

The final research article by Wang examines the game *Romance of the Three Kingdoms*. In the article, Wang studies both the develop-
The development of a literate game player and how players understand the design of a game based on real history. The author’s data suggested positive outcomes for history game/simulation use. Notably, students who played the game were more knowledgeable about the historical time period of the game and had greater motivation to learn history than their non-player counterparts.

In addition to the research articles, there are two other manuscripts in this issue. The first is a narrative exposé on the design of a virtual space. Academic journals like IJGCMS include articles that help build the foundation of research for our fields and disciplines. However, it is also important to be willing to explore game and simulation research and theory from innovative perspectives. With this in mind, I invited Guynup to write about his lessons learned from videogame travel. His article addresses the notion of virtual space; it is a self-described design document from a designer of virtual spaces.

The second manuscript is a book review authored by Dubbels, who examined Understanding Video Games: The Essential Introduction. The book is a 2008 publication from authors Simon Egenfeldt Nielsen, Jonas Heide Smith, and Susana Pajares Tosca. The book explores the complexity of video game studies; in doing so, it presents a transdisciplinary approach to the topic. Dubbels found the book to be a well-crafted guide for games studies as an emerging academic area of study.

IJGCMS publishes research articles, theoretical critiques, and book reviews related to the development and evaluation of games and computer-mediated simulations. One main goal of this peer-reviewed, international journal is to promote a deep conceptual and empirical understanding of the roles of electronic games and computer-mediated simulations across multiple disciplines. A second goal is to help build a significant bridge between research and practice on electronic gaming and simulations, supporting the work of researchers, practitioners, and policymakers. We appreciate your submissions to IJGCMS and look forward to reviewing your work in the future. Questions about publishing, reviewing, or proposing a special issue can be directed to the editor at (ijgcms@gmail.com). For a list of representative topics and a call for papers, please visit the website at: http://www.igi-global.com/ijgcms.

REFERENCES


Davis, G., & Fiske, P. (2000). Results of the 1999 PhDs.org graduate school survey. Paper presented at the re-envisioning the Ph.D. Conference, Seattle, WA.


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