REMEDIATING THE PROFESSIONALIZATION OF DOCTORAL STUDENTS IN RHETORIC AND COMPOSITION

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ABSTRACT

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In the twenty-first century, advancements in technology continue to influence our understanding of literacy education. According to the National Council of Teachers of English, “[b]ecause technology has increased the intensity and complexity of literate environments, the twenty-first century demands that a literate person possess a wide range of abilities and competencies, many literacies.” Due to the literacy needs of students in the twenty-first century, graduate student professionalization (i.e. the process of acclimating graduate students to their roles as scholars and literacy educators) has become increasingly complex. To explore how graduate programs in the field of Rhetoric and Composition Studies prepare their students to be faculty members in a digital age, this dissertation examines how four doctoral programs throughout the United States are responding to the pedagogical and institutional demands for preparing technologically literate faculty.

Relying on six research questions, this dissertation provides a focused look at how graduate students are professionalized at various points in their programs ranging from coursework to dissertation work. Each of the four case studies triangulates a variety of quantitative and qualitative data (curricular materials, surveys, and interviews), which was gathered from graduate students, faculty advisors, and administrators. The data represented in this dissertation indicate how graduate students and faculty are finding a balance among traditional approaches to professionalization and more recent demands for integrating technology throughout graduate education. The findings suggest that faculty and graduate students need
more encouragement to share the responsibility for technology integration throughout the
graduate student professionalization process. Recommendations are provided at the conclusion
of this dissertation for how doctoral programs can integrate technology more effectively in
practice given the professional needs of students and faculty members. Given the findings of
these case studies, the field of Rhetoric and Composition Studies can gather more insight about
its approaches toward educating its emerging scholars and how those approaches are influenced
by advancements in technology.
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CHAPTER I. REMEDIATING THE PROFESSIONALIZATION OF DOCTORAL
STUDENTS IN RHETORIC AND COMPOSITION

The field of Rhetoric and Composition Studies has witnessed an overall growth in the number of doctoral programs and the number of doctoral students specializing in the field. According to the “2007 Survey” of 67 doctoral programs, “707 dissertations [were] completed between 1993 and 1999” and 1,025 dissertations were completed between 2000 and 2007 (Brown, et al., 2008, p. 332). This promising increase bodes well for the future of the field, but it also demonstrates the need to evaluate how graduate education might change to accommodate such growth. Programs report their positive attributes such as, “mentoring and individual attention to students, job placement rates, the availability and integration of technology into their curricula, interdisciplinarity, the attention to professionalization, program flexibility, and the merits of their faculty” (Brown, et al., 2008, p. 339), but how do these brief reports reveal the complexities we face with regards to the professionalization process in graduate programs? One significant aspect of this process involves the use of technology as it’s situated among traditional strategies for educating graduate students. Charged with the large goal of literacy education, how will we need to modify the professionalization process within the context of changes in our understanding of literacy in the twenty-first century?

Our understanding of literacy in the twenty-first century continues to change rapidly in response to changing technologies, which inevitably has “implications for how teachers plan, support, and assess student learning” (NCTE, 2008). For the field of Rhetoric and Composition Studies, this change creates a need for us to reconsider how we educate current and future faculty members in response to the “multiple, dynamic, and malleable” literacy needs of students in a digital age (NCTE, 2008). For faculty members, “the focus of writing instruction is expanding:
the curriculum of composition is widening to include not one but two literacies: a literacy of print and a literacy of the screen” (CCCC, 2004). The task of including these literacies is the responsibility of faculty who teach undergraduate writing and graduate faculty who face a similar task as they mentor future faculty. In response to our new understanding of literacy, more research on graduate education and the use of technology needs to be conducted within Rhetoric and Composition Studies to further develop mentoring strategies for new and experienced members in the field.

To learn more about how graduate programs in the field prepare their students to be faculty members in a digital age, this dissertation explores how doctoral programs are negotiating a balance between the traditions of doctoral education and the demands for preparing technologically literate faculty. I explain, in the introductory chapter to this dissertation, how I came to this project as a graduate student interested in finding connections among my researching interests and my understanding of my own, as well as other’s, professionalization processes. After reflecting on these experiences, I explain how the field has discussed graduate education and how it has responded to changes in literacy practices due to advancements in technology.

Though there is some literature that explores how technology can be integrated throughout specific aspects of the professionalization process (i.e. teaching training, the use of electronic portfolios, electronic theses and dissertations), there are few resources that address the possibilities and challenges of doing so throughout the professionalization process as a whole. That in mind, this chapter demonstrates the complexity of this type of research by acknowledging a number of themes among current conversations in the field. Though not entirely inclusive, these themes include: developing digital literacy skills in the classroom;
faculty and graduate student roles; the production and dissemination of scholarship; candidacy exams and dissertations; and pre-tenure faculty expectations. Collectively, these conversations represent what we should reconsider as we remediate (Bolter & Grusin, 1999) rather than replace traditional strategies in the professionalization process of doctoral students in Rhetoric and Composition. This chapter then concludes with a brief description of the remaining dissertation chapters as well as a forecast for how this research contributes to the future of doctoral education in the field.

My Professionalization Process

It did not take long for me, after entering the doctoral program at Bowling Green State University (BGSU), to find and participate in a variety of professionalization activities beyond my coursework. My experiences presenting at conferences, writing/publishing articles independently and collaboratively with faculty and students, serving as a section editor for Computers & Composition Online, and co-directing a digital literacy camp for young girls all gave me opportunities to learn about how to become a faculty member. Though all valuable experiences, it wasn’t until I participated in more administrative positions within the program that I strongly considered how graduate student professionalization was functioning for others within the Rhetoric and Writing doctoral program and within the field at large. Finding ways to offer professional support to my colleagues, while serving in these positions, enabled me to see the necessity for a range of professional development strategies within each graduate program.

As a program assistant for the Rhetoric and Writing program at BGSU, my responsibilities included: organizing monthly professional development meetings for first- and second-year doctoral students; distributing a semi-annual newsletter to students, faculty, and alumni; and communicating with prospective graduate students. My dual role as a student and
mentor to other students challenged me to reflect on my own professional development as well as the professional development of others. Already invested in research focused on computers and writing and writing assessment, I sought ways to connect my experiences as a graduate student with my approach to inquiry, which led me to my participation in a collaboratively written article for a special issue of Computers and Composition on the future of graduate education.

In the article, “Remediating Knowledge-Making Spaces in the Graduate Curriculum: Developing and Sustaining Multimodal Teaching and Research,” Kristine Blair, Lee Nickoson-Massey, and I (2009) reflect on our varied experiences with technology based on our varied positions within the Rhetoric and Writing program in as a response to the broader conversations in the field about the graduate curriculum. The process of working on this article, while it played an essential role in my own professionalization and my understanding of professional development in the field, still left me with questions about how exactly graduate programs are integrating technology at various points in the professionalization process. How was professional development functioning within other Rhetoric and Composition doctoral programs to support students through coursework, conference presentations, publications, exams, and dissertations? As a graduate student invested in sharing the responsibility of integrating technology throughout the professionalization process—something we advocate for in our article—I felt the need to make a contribution to the field by conducting an empirical study about doctoral education for my dissertation.

The Doctorate in Higher Education and Rhetoric and Composition Studies

Before examining discussions about doctoral education in Rhetoric and Composition, it’s important to recognize how the doctorate is broadly changing in higher education. These
conversations influence our approaches to doctoral education because the challenges the academy faces are the challenges we all share in terms of training our graduate students. According to Chris M. Golde (2006), research director for the Carnegie Initiative on the Doctorate, “[s]tudies and reports of the 1990s echo their counterparts from the 1970s and 1980s, emphasizing ways in which conventional doctoral programs do not meet the needs of students, employers, and society” (p. 5). Though there are doctoral programs that have challenged traditional approaches to graduate education by venturing beyond the academy, it has taken some time to do so and not all programs have made changes. In the twenty-first century, we are still facing challenges in doctoral education where apprenticeship has remains the same from generation to generation due to maintaining traditional rites of passage (Walker et al., 2008).

Comprehensive exams and dissertations are two of the most traditional rites of passage and create debate among members of the field who are examining the roles these activities play in the professionalization process—these debates are explored in more detail under the candidacy exam and dissertation theme later in this chapter.

In response to these traditions and the study of doctoral education in higher education, the Woodrow Wilson Responsive Ph.D. Initiative (2005) has offered a number of recommendations for doctoral programs to consider in the twenty-first century. One of the recommendations made by the Responsive Ph.D. Initiative (2005) indicates the need for graduate programs to “become a vital force in breaking down barriers between programs and sponsoring a more cosmopolitan intellectual experience for doctoral students” (p. 2). “Responsive Ph.D. Programs” not only inspire interdisciplinary work, but they also need to work in places beyond the academy. Advocates of this approach to doctoral education recognize the problems with training future faculty who remain in the ivory tower.
For the Rhetoric and Composition Studies community, challenging doctoral traditions also means challenging literacy education traditions through the integration of technology. In *Rhetoric Review*’s “Portrait of the profession: The 2007 survey of doctoral programs in rhetoric and composition,” the findings suggest that graduate programs in the field of Rhetoric and Composition Studies value the need for professionalizing their graduate students and that programs are integrating technology into their curricula (Brown, Enos, Reamer, & Thompson, 2008). This brief report, however, does not show exactly how institutions integrate technology throughout the entire professionalization process (i.e. the process of acclimating graduate students to the roles they will play in the field beyond graduate school). As future faculty and administrators, graduate students will need to be aware of, and confident in, the use of technology as it pertains to their work in the academy. One challenge to meeting this need pertains to the challenge in finding enough graduate faculty within each doctoral program who can model how technology is integrated throughout their work. As apprentices, graduate students need to not only find ways to incorporate their digital literacy skill development throughout their professional development, but they also need to see how faculty have done the same throughout their careers. Making their successes and failures visible throughout the professional development process can establish a stronger sense of collegiality and responsibility among faculty and their students.

Without a sense of shared responsibility to digital literacy development throughout the professional development process, doctoral programs face the risk of framing technology as a skill that is peripheral to other skills needed to become a member of the field. Though it may not be true in all graduate programs today, not long ago Janice Walker (2002) argued that
many graduate education programs in English studies, composition studies, rhetoric, linguistics, and related areas either ignore technology completely or perhaps include it as a ‘skill’ that can be quickly acquired as necessary. Few of our graduate programs actually offer graduate students a grounding in all of the important work that has already been done in this area--and fewer still consider computers and composition as a discrete area of specialization.

In contrast to Walker’s views of graduate programs, there are programs today that pay more attention to technology during the professionalization process. However, survey results show that only five, out of 67 programs in the field, label computers and writing or digital media courses as a core course in the graduate curriculum (Brown, Enos, Reamer, & Thompson, 2000). These numbers alone are not indicative of how the field approaches digital literacy development in its graduate programs. They do, however, raise questions for how we understand technology integration in graduate programs. At what points are doctoral programs incorporating digital literacy development throughout the professionalization process? If not addressed during coursework, how are programs using technology to prepare their students for job market demands?

Using technology as a means to facilitate digital literacy development throughout the professionalization process will help prepare students for a job market that expects quite a bit from applicants. As we mention in our article, job market demands have not changed significantly over the last ten years (Graupner, Nickoson-Massey, & Blair, 2009) with regards to the need for expertise in computers and writing. Our references to the October 2007 MLA Job List indicate that there are “increasing calls for expertise in ‘digital literacies, new media theory and production, and critical theories of technologies,’ or an ability to teach courses via distance
or ‘hybrid delivery modes,’ emphasizing training in computers and writing as a ‘plus’” (Graupner, Nickoson-Massey, & Blair, 2009, p. 20). For doctoral programs, meeting these expectations from institutions in the job market can seem like a daunting task when they are already responsible for helping students develop the expertise necessary to be knowledgeable members of the Rhetoric and Composition field. Doctoral programs need to find ways to approach digital literacy development as a strategy that is incorporated throughout, rather than added to, traditional approaches to professionalization. As explained later in this dissertation, this will require programs to revise some traditions while also establishing new ones to improve digital literacy development.

Helping students develop expertise in the above areas is not the only challenge doctoral programs face. To prepare students for working in a digital age, programs need to also examine how each of their current strategies can benefit from technology integration. Analyzing and implementing technology on a strategy-by-strategy basis will help programs better meet the demands of the job market while managing the workload more effectively. In terms of graduate curriculum, Karen P. Peirce and Theresa J. Enos (2006) suggest that it fails to align with trends in the job market based on their survey of doctoral programs in the field. Specifically, Peirce and Enos (2006) report that “core courses are not reflective of current specializations in demand in job ads, and we also find that paper assignments in most courses are not aimed at helping students build a dossier of publications, even though expertise in these specializations and a record of publication are becoming more and more important to landing a job out of graduate school” (p. 204). While it may create workload challenges for graduate coordinators and faculty, regularly evaluating the connections among coursework, other professionalization strategies, digital literacy development, and job market demands will help programs mentor their students
more effectively.

Teaching graduate students to learn about the field through coursework and other professional development activities, while also training them to publish as knowledgeable members of the field with a sense of authority, takes time and resources that not all doctoral programs have. Add the demands of preparing graduate students to work at institutions that are likely to be different from the institutions from which they received their degrees, or at locations outside the academy, and the professionalization process begins to look even more complex. With so many challenges, it is the responsibility of doctoral programs and their students to find ways to combine and connect multiple skill-building activities throughout the professionalization process. Just as we need to find ways to integrate digital literacy skill development throughout the professionalization process, we also need to find ways to integrate the development of other scholarly skills (e.g. pedagogy, publishing, etc.) throughout the process. This approach will better prepare graduate students to navigate the demands of the careers they choose once they complete their degrees.

Not only should we be focusing our attention toward the connections between graduate coursework and expectations on the job market, we should also be assessing how professionalization activities beyond coursework prepare students for the job market. If we begin to more directly evaluate the roles these activities play in graduate student professional development, we can then find more effective strategies for integrating digital literacy development throughout each activity. Graduate student professionalization is a complicated process, though, which Cindy Moore and Hildy Miller (2006) seek to demystify for students in A guide to professional development for graduate students in English. Many of the strategies described in Moore and Miller’s (2006) text are already implemented in a number of graduate
programs. For example, most doctoral programs in Rhetoric and Composition have workshops and/or courses to assist students with learning about theory and practice in the discipline, teaching, publishing, and job placement (Brown, Enos, Reamer, & Thompson, 2008). While graduate students may be aware of these “visible agendas” (e.g. coursework, assistantships, exams/thesis/dissertation, faculty advisors and committees), not all students are directly aware of the “hidden agendas” (e.g. responsibility, collegiality, and autonomy) necessary to succeed during and after graduate school (Moore & Miller, 2006). Contrary to the visible agendas, the hidden agendas require more attention and reflection on behalf of the student throughout the entire program. For example, students are assigned by faculty members to do the work associated with the visible agendas whereas students are not necessarily assigned to reflect on the invisible agendas. Though not explained directly in Moore and Miller’s (2006) text, the integration of technology throughout the professionalization process can complicate the visible and hidden agendas further by seemingly adding to the workload of students and faculty if that technology use is seen as peripheral to those agendas. More research needs to be conducted in doctoral programs to understand how technology is integrated throughout these visible and hidden agendas so that we can learn how to provide effective professional support with student and faculty needs in mind.

While graduate programs may have the best intentions as they attend to the visible and hidden agendas in their professionalization strategies, this does not mean that they can account for everything a new faculty member will experience during her first position after graduating. For example, graduate students may not have the same access to technology or have the same support for the development of digital literacy skills that they did in their doctoral programs. In a digital age, students not only have to be trained to integrate technology in their own work, but
they also have to be trained to be advocates for digital literacy development once they leave their home institutions. In Kristin L. Arola and Cheryl E. Ball’s (2007) article, “A conversation: From ‘they call me doctor?’ to tenure,” both authors interview a number of faculty who have already moved through the process of tenure as well as reflect on their own experiences as new faculty in the area of computers and writing. Their article reveals some of the difficulties graduate programs may face when preparing students for jobs in programs that are very different from the institutions in which they came from (i.e. many graduate students go on to teach at institutions where there are few, if any, faculty who specialize in Rhetoric and Composition Studies) and further suggests the complexities programs face in a discipline that continues to shift rapidly. For example, faculty who were educated without or with little use of technology during their graduate programs now face the challenge of educating graduate students by integrating technology throughout their programs. How then, do Rhetoric and Composition doctoral programs prepare graduate students for the pedagogical and institutional challenges of working in a digital age?

In general, students learn how to meet these challenges as graduate programs give them theoretical frameworks in their coursework and guidance beyond the classroom to help them inform their practice as teachers, researchers, and administrators. For doctoral programs, the pedagogical challenges include the pressure(s) from students, peers, and department chairs to use technology in the classroom and to teach students how to be critically, rhetorically, and functionally literate (Selber, 2004) with respect to those technologies. Just as pedagogy needs to shift in response to the demands of a digital age, institutional contexts contribute to the challenges doctoral programs need to face as they rethink the professionalization process. Some of these challenges include: the availability and accessibility of hardware and software to
instructors and to students (the monetary costs of these technologies present challenges to students and instructors); the availability of training and support from departments and colleges needed to accommodate for the learning curve associated with using various technologies and the somewhat unreliable nature of technology; and the incentives, or lack of incentives, for faculty members who use technology, and/or participate in professional development, and/or specialize in computers and writing research.

Broader institutional challenges are connected to the accessibility of a doctoral education in Rhetoric and Composition Studies. In a digital age, the accessibility of a doctoral education to members of the field who are not doctorally trained influences our ability to integrate digital literacy throughout the field. Isolating digital literacy education to graduate student professional development would likely create a new digital divide between new and experienced faculty. In their article, James Inman and Dagmar Stuehrk Corrigan (2001) explain a “people problem” in the field, which means “the field has a number of outstanding teachers and scholars who are not doctorally trained, which generally means they cannot advance into positions of leadership within their institutions” (p. 413). Further, Inman and Corrigan (2001) suggest, these population changes may lead to a need for the field to adopt more online doctoral programs—currently Texas Tech offers the only online doctoral program where you can specialize in Rhetoric and Composition Studies. To research the consequences of access to a doctoral education in the field, Inman and Corrigan (2001) conducted a survey of administrators “to describe their recent searches for computers and writing professionals, including strengths and weaknesses they saw in applicant pools” (p. 413). They received 71 responses from administrators at four-year institutions and 58 responses from graduate degree granting institutions. The responses indicated that institutions have a broad range of expectations from their applicants, which suggests that
graduate students need to be prepared to meet these expectations through a “[doctoral program] that continually adapts to the changing opportunities and implications of technology and one that well represents field diversity” (p. 418). At the end of their article, Inman and Corrigan (2001) propose a degree-granting online consortium that can serve part-time adult learners looking to advance their professions, rather than residential, full-time doctoral students. This type of professional support could not only be beneficial online but also, if conducted on an institutional basis, to assist faculty who are interested in advancing their computers and writing skills to better serve their changing graduate student populations and their understanding of their changing roles as faculty in the field.

The number of pedagogical and institutional challenges facing doctoral programs in a digital age is great. This why it’s essential to examine how all of these challenges are connected to each other and how they can be more effectively met through the integration of technology. Before suggesting how to integrate technology more effectively throughout graduate student professionalization process, I offer an analysis of how the field has commented on our current strategies for professionalization. Of the many possible strategies, I’ve chosen to explore the following: developing digital literacy skills in the classroom, faculty and graduate student roles; the production and dissemination of scholarship; candidacy exams and dissertations; and pre-tenure faculty expectations. All of these strategies work together to socialize graduate students into the field. Therefore, all of these strategies must accommodate technology integration if we are to effectively prepare our graduate students for the digital age.

Developing Digital Literacy Skills Beyond the Classroom

To research how doctoral students integrate technology throughout the professionalization process, one must acknowledge the importance of conversations in the field
that address the immediacy of developing digital literacy skills. In graduate education, faculty and students need to be multiliterate and advocates for multiliteracy in order to respond to the needs of literacy education in the twenty-first century. Though many conversations about digital literacy focus on education in the classroom, the same conversations should be applied to our approach to education outside the classroom. For graduate education, it means looking for ways to integrate digital literacy development throughout all aspects of the professionalization process.

Therefore, this section offers suggestions for how we can draw connections between the challenges we face in digital literacy development and the broad challenges we face in graduate education.

Much of the research that calls for the integration of technology in literacy education advocates for understanding literacy as multimodal. In other words, we use multiple literacies to communicate in multiple media in multiple contexts to multiple audiences. In a digital age, effective communicators are multiliterate which is why Stuart Selber (2004) calls for the need to teach functional, critical, and rhetorical literacy skills when incorporating technology throughout the curriculum. According to Selber (2004), to be well-versed in technology, writing specialists need to have both a developed sense of their own functional, critical, and rhetorical technoliteracies, and a developed sense of how to help their students acquire these literacy skills. Like digital literacy skills, the literacy skills needed to become professionals in the field are multimodal and require the same amount of reflection to sustain. Reflection and a critical awareness of one’s multiliteracy development are strategies that can help graduate faculty and students “pay critical attention to the issues generated by technology use” (Selfe, 1999) so that they are not reduced to mere tools arbitrarily added to one’s professional and digital literacy development. One of many challenges to developing these skills is doing so while approaching
new technologies with a sense of patience for the time it takes and how that time influences the time devoted to the traditional workload in a graduate program.

In graduate education, faculty and students need to cover a significant amount of content in order to create a strong sense of foundational knowledge. On its own, this is a significant challenge due to the large number of specializations in the field. For students and faculty, the thought of incorporating technology throughout the development of this foundational knowledge can seem like an addition to the already heavy workload. Rather than incorporating technology use throughout the professionalization process, faculty and students may choose to use it in minimal ways or may choose to avoid it altogether because they assume that being digital literate means to be able to use several different technologies. As DigiRhet.org (2006) explains, resisting the temptation that equates being digitally literate with knowing how to master several different technologies is difficult for students when they face pressures from outside the classroom to meet the high expectations of potential employers. They acknowledge that “despite our deemphasis on software know-how, students receive conflicting messages from other sources that suggest that they must be competitive in the increasingly global job market, and learning more software as quickly as possible is one way to do so (DigiRhet.org, 2006, p. 254). For graduate programs in Rhetoric and Composition Studies, the pressures can come from the desire to prepare students for a job market that expects applicants to be widely knowledgeable users of a variety of technologies—ones that undergraduate students may already be well-versed in—and in a variety of research, pedagogical, and administrative skills.

In addition to Selfe (1999), Selber (2004), and DigiRhet.org’s (2006) arguments, the views of Chris Anson in his recent interview with Computers and Composition Online demonstrate the need to examine the technology integration throughout the field. From a writing-
across-the-curriculum perspective, Anson acknowledges how his university supports technology use as it pertains to developing writing skills (Coley & Erickson, 2009). At Anson’s institution, there is support for faculty across the disciplines to use technologies like Microsoft Word to provide electronic feedback on student work by inserting text-based comments and then returning student work electronically through e-mail or course management systems. At the same time, Anson feels that there is not enough support for creating multimedia projects with pictures, audio, text, etc. due to faculty not assigning such projects across the curriculum (Coley & Erickson, 2009). Anson’s experiences probably vary from the experiences one faces as a program administrator for a doctoral writing program due to available funding, staffing, and serving faculty across the disciplines versus graduate students within Rhetoric and Composition. Still, Anson’s perspective demonstrates that there are institutional needs for Rhetoric and Composition specialists with the skills to integrate technology through writing. If graduate programs are socializing their students to become advocates of literacy education in a digital age, then they must prepare those students to use those skills within their departments and across the university.

It is likely that as more institutions seek job applicants with the experience and the theoretical knowledge to teach in computer-mediated spaces that are entirely online or a hybrid of face-to-face and online communication, they are also likely to seek applicants who can influence literacy education across the curriculum. As part of the graduate professionalization process, the integration of technology in one’s pedagogy, research, and the development of one’s professional identity will help to give students the confidence and digital literacy skills necessary to meet the job market demands. The issues that Selfe (1999), Selber (2002), DigiRhet.org (2006), and Anson (Coley & Erickson, 2009) address influence the field of computers and
writing as well as how we teach graduate students how to “pay attention” to their technology use in effective ways beyond using it in a single graduate seminar course.

Reflectively developing technology use in one’s teaching is one way for graduate students to pay attention to technology beyond the seminar course. Placing an emphasis on digital literacies in the composition classroom as a graduate student can be worthwhile, yet challenging at the same time if the goal is to assign multimodal texts. In Anthony Atkins, Cheryl Ball, Krista Homicz Millar, Cynthia Selfe, and Richard Selfe’s (2006) “Integrating multimodality into composition curricula: Survey methodology and results from a CCCC research grant,” the authors suggest that instructors need more professional development support in order to effectively incorporate multimodal compositions in their classrooms. While graduate students may have the support from their faculty mentors to guide their pedagogical choices, they may not have the flexibility to make those choices if there are pre-determined requirements set by the department for teaching composition courses (e.g. essay and assessment requirements for first-year composition courses). There also may not be access to the software needed to implement a multimodal assignments depending on the resources available at individual institutions. Though the population from the Atkins, et al. (2006) survey did not focus on doctoral students, as my research will, this article suggests that there is a need for incorporating support for integrating technology as members in the field gain professional experience in the field at all points in their careers.

Integrating technology throughout a graduate program also raises questions for how new media technologies are scrutinized and accepted by members of the academy, based in part on their visibility. As Denis Baron (1999) suggests, technologies begin as new and visible, and then move to old and invisible giving readers a perspective for how they may choose to respond to
emerging technologies today. The pattern of old and emerging literacy technologies from Baron’s perspective is applicable to how doctoral programs perceive the visibility of technologies at their institutions. For example, the locations of computer labs on campus may be more visible to doctoral students and faculty than the on-campus services available for graduate students and faculty to develop their digital literacy skills by learning new software because the computer labs are used regularly. The use of Web 2.0 technologies, such as Facebook, in pedagogy may be visible in departments where it’s considered innovative, yet invisible in departments where it’s become more commonplace as a means for communicating with students. Regardless of being innovative/visible or commonplace/invisible, doctoral programs must encourage their students and faculty members to reflectively analyze technologies as they are integrated in the classroom and the rest of the professionalization process as well. Doing so will make technology integration an essential component of graduate education rather than a peripheral skill.

At the heart of these conversations is the notion that technology and writing are no longer the sole responsibility of computers and writing specialists in the field of Rhetoric and Composition Studies. All faculty and graduate students in Rhetoric and Composition doctoral programs must be agents in their digital literacy development just as they are agents in their overall professional development. The challenge, however, lies in being able to merge their digital literacy development with their professional development agendas in effective and efficient ways that are mutually beneficial for both graduate students and faculty.

Faculty and Graduate Student Roles

Traditionally, graduate students are viewed as novices whereas faculty are considered experts on theory and practice in the field. However, when we integrate technology throughout
graduate programs we change how we view the traditional roles of faculty and graduate students. In this section, I describe how mentoring relationships among faculty and graduate students contribute to professional development and how the integration of technology influences those relationships. Rather than seeing technology integration as an addition to traditional mentoring relationships, I see it as an opportunity for faculty and graduate students to contribute more effectively to the development of their collegial relationships. Establishing these types of relationships early on and maintaining them throughout one’s graduate education will help students learn the skills they need to work as colleagues in the field.

Varying digital literacy skills among faculty and graduate students contribute to the development of their collegial relationships. In many cases, graduate students enter doctoral programs with more developed digital literacy skills than faculty members. The differences among the faculty and graduate student skills, with regards to knowledge of field and knowledge of digital media respectively, can level the inherent power dynamic and promote more collegial work. For example, both Angela Crow (2006) and Debra Journet (2007) reflect on how their experiences as advanced faculty members with novice amounts of technology knowledge affect their roles as teachers and mentors. Crow (2006) mentions that faculty members need to learn how to situate themselves as learners rather than experts on techno-literacies. Though difficult at first to position one’s self as a learner, faculty who do are more likely to meaningfully integrate technology in their work.

Accepting the role of learner is not the only strategy for faculty to adopt as they develop their digital literacy skills, rather they need additional support to maintain those skills. Debra Journet (2007), for example, explains how her experiences at the Digital Media and Composition Institute (DMAC) in 2006 helped her realize the type of support senior faculty members need as
they learn about multimodal composition and how it can be implemented at local institutions. She recommends that computers and writing faculty work with senior faculty, who do not specialize in computers in writing, in order to find ways for all faculty members to benefit from each other’s expertise (Journet, 2007, p. 117). Most importantly, Journet (2007) suggests that departments offer “longer, intensive experiences that balance theory and practice and provide support for first-timers and that make learning pleasurable” (p. 117). Providing this kind of support for senior faculty members would not only increase the likelihood of integrating technology throughout the professionalization process, but it would also create opportunities for graduate students—who could assist in digital literacy development experiences for senior faculty—to play a more collegial role in their programs.

The disparity among digital literacy skills not only creates opportunities for faculty to learn with their graduate students, but it also prompts us to reexamine how the marginalization of graduate students can change the roles each group plays in the professionalization process. For example, this can likely happen if a graduate student is technologically savvy and her skills are primarily requested for troubleshooting. Marginalizing one’s digital literacy skills to troubleshooting creates limitations for faculty and for graduate students. Outsourcing a faculty member’s technological needs to a graduate student will prevent that faculty member from developing her digital literacy skills and it will prevent the graduate student from developing her professional development skills as a collegial scholar. With respect to graduate student professional development in general, Lisa Ede (2004) and Andrea Lunsford (2007) both advocate for improving graduate student agency and responsibly participating in the various types of work that faculty conduct. Ede (2004) points out that students are disciplined in multiple ways that are not constrained to intellectual, emotional, or physical. In her article, she shows two
common graduate student perspectives: (1) that some believe graduate school is a disciplining function and “does little to convey the specificity of their experience” and (2) graduate students might observe, for instance, that although they recognized the ways their training required them to accept, and even embrace, professional and disciplinary norms, they were conscious agents who negotiated the demands of graduate education in order to gain the knowledge and credentials they desired. (Ede, 2004, p. 169)

Given these two perspectives, Ede’s (2004) text shows that varying perspectives deserve varying approaches to professionalization, which includes being in tune with student needs as well as the needs of the field to prepare them for careers beyond the program so that they’re not becoming marginalized.

Based on her experiences as a graduate student, Lunsford (2007) resists the marginalization of graduate students by explaining how she sees an ideal PhD experience in English Studies. Most importantly, she writes

A PhD program with any of the features I have described would necessarily be one in which graduate students were colleagues rather than acolytes, our partners in exploring major issues, in constructing new knowledge, and in sharing the wealth of our experiences, our learning, and our teaching. (Lunsford, 2007, p. 69)

Creating more collaborative opportunities among graduate students and faculty could lead to reducing the workload for all members in the graduate program as it pertains to keeping up with fast-paced technological changes. An effective approach toward professionalization should in part reflect what Stephen North (2000) describes as the intradisciplinary roles within English Studies. In Refiguring the Ph.D. in English Studies: Writing, doctoral education, and the fusion-based curriculum, North (2000) suggests that we implement a “fusion-based curriculum” as the
best means for creating more opportunities for faculty and graduate students to work together in dialogic rather than hierarchical ways. He defines fusion as having three key elements: everyone involved must commit to locked-room negotiations; doctoral students must be afforded a major role in the deliberations as participants, not spectators; and the graduate faculty must be willing to renegotiate their disciplinary and professional status vis-à-vis one another and those doctoral students. (North, 2000, p. 255)

More recently, Chris Anson and Susan Miller-Cochran (2009) discuss how technology use can give graduate students more agency in their education. Through the use of a wiki, students were able to create new knowledge for a required course at North Carolina State University, which benefited the instructor teaching the course and students enrolled in the course the following year (Anson & Miller-Cochran, 2009). This example and other discussions in the field represent the need for collaborative collegiality among doctoral students and faculty, which is crucial in general to success as well as crucial if we intend to integrate technology throughout the program by sharing the responsibility of doing so. As a starting point, graduate students will need to be mentored to consider these issues actively, not just for becoming technologically confident, but in order to enter their roles as emerging scholars.

The Production and Dissemination of Scholarship

As the use of technology becomes more acceptable for the exchange of ideas and the production of knowledge in the academy, graduate students will need to be prepared to produce and disseminate scholarship in digital spaces as well as traditional print spaces in the future. Charged with educating future faculty, who could be educating future graduate students, doctoral programs need to prepare their students to respond to knowledge-making shifts in the academy.
as it pertains to scholarly publication. In this section, I show how doctoral programs will need to balance their professionalization efforts between teaching students to adopt disciplinary conventions for producing scholarship and teaching students to develop and sustain their digital literacy skills.

Within research focused on graduate students producing scholarship, there are a number of perspectives as to how students can and should be professionalized. In a case study of one doctoral student at Carnegie Mellon University conducted by Carol Berkenkotter, Thomas N. Huckin, and John Ackerman (1991), the authors suggest that we continue to explore the tensions that exist within students as they move from composition teachers to composition researchers. Students may have difficulty merging writing with an interdisciplinary approach (in the case of Carnegie Mellon there’s a social science emphasis in the rhetoric program), and “the development of academic communicative competence (or academic literacy) involves the ability to adapt one’s discourse as the situation requires” (p. 211). Though their research was conducted some time ago, their points are still relevant today as Rhetoric and Composition Studies continues to expand its number of specialties while scholars consult research in education, women’s studies, sociology, psychology, history, and other fields within the university to find new ways to approach literacy education and writing theory. The complicated nature of professionalizing graduate students, according to the work of Berkenkotter, Huckin, and Ackerman (1991), can be complicated further for faculty and graduate students as we integrate technology throughout the process of producing and disseminating scholarship.

Integrating technology into doctoral programs may create additional challenges for how we teach students to write in mediated spaces while complicating further the tensions already evident in commonly practiced means for socialization. For example, writing in mediated spaces
often requires the author to compose in a non-linear fashion, which can be counterintuitive for scholars experienced in traditional, linear, print formats. Graduate students who write seminar papers in preparation for the types of articles they’ll be required to publish already face the challenge of learning the discourse of the field. This challenge is compounded further when we integrate technology by asking students to compose in new media formats comparable to what they would publish electronically in peer-reviewed forums.

Due to inexperience in the field that contributes to these challenges, some scholars such as Janice Lauer (1997) would suggest that graduate students avoid trying to publish early in their careers in order to practice the disciplinary discourse necessary to participate in the field broadly. This approach can work, but students would have to be given the opportunity to practice disciplinary discourse in print and digital formats. Not only would this professionalization strategy need to incorporate these practices in multiple spaces but it would also need to be approached with a sense of caution toward potential marginalization. If graduate students only have opportunities to practice the disciplinary discourse privately, their voices remain silent in the field at large. Unfortunately, this approach can contribute in part to the (in)visibility Marcy Taylor and Jennifer L. Holberg (1999) describe of graduate students in composition programs which leads to a split identity (part student/part teacher-scholar). This split identity can make it difficult for graduate students to make the transition to being faculty members who are prepared for their positions as teachers and scholars when they leave the program.

As a field, we advocate for a balance between our roles as teachers and our roles as scholars, yet programs tend to still train their graduate students to heavily emphasize scholarship. According to Margaret J. Marshall (2004) there is a disconnect between scholarship and teaching in the field, which contributes to how the profession is viewed by outsiders as well as how we
train graduate students, among others, to enter the field. Specifically, Marshall’s (2004) argument addresses how the emphasis on scholarship marginalizes the teaching graduate students do in their programs. For graduate students, learning how to integrate technology in their own teaching can be at odds with what they need to learn to become members of the field in general. These challenges, influence efforts toward professionalizing graduate students through scholarship and teaching that are inevitably political, which complicates the ways in which we integrate technology in that process.

Not only are the conversations surrounding graduate students as producers of scholarship relevant, but also the arguments addressing the place for publishing in electronic spaces are crucial to how technology should be integrated throughout graduate programs. Though many online journals in Rhetoric and Composition Studies focus primarily on research in computers and writing, these are not the only journals publishing in online spaces (e.g. Enculturation: a journal of rhetoric, writing, and culture and Composition Forum). As future faculty charged with being technology advocates at their universities, graduate students should at least be knowledgeable about publishing in new media even if their research interests do not align with the interests of electronic publication venues. This type of knowledge is important since future faculty are likely to have roles on tenure and promotion committees where they will be expected to evaluate the work of other scholars who are publishing in digital spaces.

Though not widely accepted by tenure and promotion committees in the field, online scholarship is becoming increasingly valuable in a digital age. Its ability to reach a broader audience than traditional print texts and its ability to be updated more regularly makes online scholarship an essential component of the knowledge-making process. For graduate students as future faculty members, learning how to work within the constraints of tenure and promotion
committees as well as advocating for the value of online scholarship are necessary skills for scholars to adopt. Being able to see the connections between what Steven D. Krause (2007) explains as “scholarship,” which means it serves for the purposes of promotion and tenure guidelines, and “Scholarship,” which furthers conversations in the field and makes contributions broadly, is one way for graduate students to learn these skills. This distinction situates how we might discuss the purposes behind integrating technology throughout graduate programs if we consider making the distinction between these types of scholarship and how efforts in one type can oftentimes lead to the other (e.g. keeping a blog). By understanding how to balance efforts toward teaching students to produce traditional scholarship with efforts toward writing in electronic spaces, we can find more efficient ways to integrate technology throughout doctoral programs. These challenges require more attention because they could further complicate the tensions already evident in the academic discourse community.

Candidacy Exams and Dissertations

The majority of doctoral programs in Rhetoric and Composition Studies require students to complete candidacy exams and dissertations after completing their coursework. While some institutions require students to deposit their dissertations electronically upon completion, technology is not always integrated throughout the candidacy exam and dissertation process itself. Students use technology to electronically access the source material they need to prepare for and complete their candidacy exams and dissertations, but this type of technology use is not the same type of use that promotes meaningful integration and the development of digital literacy skills. In this section, I explore how the challenge for doctoral programs lies in finding a balance between the traditional rigors of disciplining students and maintaining the development of digital literacy skills throughout those professionalization strategies.
Traditionally, candidacy exams are positioned after graduate students have completed their coursework as a means to assess their disciplinary knowledge. While it is important for future faculty to have a clear understanding of the field in which they will make their careers, some members of the field like Heidi Estrem and Brad E. Lucas (2003) question the nature of the candidacy exam process as it seems to contradict what we value in the field. Estrem and Lucas (2003) raise an important point for graduate programs to consider with respect to the candidacy exam, “…as scholars and teachers, we must ask ourselves if we are effectively evaluating our future colleagues—or if we’re simply forcing them to comply with our unreflective, unspoken expectations based on ‘what we went through’ to get our PhDs” (p. 408). Though the article does not focus on the integration of technology throughout the candidacy exam process, it does point to an example from one university that

in addition to ‘comprehensive written qualifying examinations,’ students are ‘further required to acquire and document a set of competencies and perspectives: historical perspective, use of technology for scholarship and/or teaching, a research tool or method, interdisciplinarity in their studies, and professional experience (teaching, internships, appropriate work experience).’ (Estrem and Lucas, 2003, p. 410-11)

Unfortunately, this is one isolated example and it raises some questions for how technology functions during the candidacy exam component of doctoral programs. How does this program integrate technology as students prepare for completing the candidacy exam process? What role does technology play in documenting one’s “competencies and perspectives” in something like a professional portfolio? While programs may ask students to document the use of technology for scholarship and teaching, the documentation can still be technologically limited if it is not delivered in a digital format. Further, technology would have to be integrated throughout the
preparation for the candidacy exam process during coursework in order to demonstrate how it’s meaningfully connected to the this traditional strategy for disciplining students.

In addition to questioning how technology is integrated throughout the candidacy exam process, it is crucial to understanding the professionalization of doctoral students that we also question the dissertation process from a similar perspective. Given that the dissertation is considered a doctoral student’s first major contribution of original research to the field, the strategies through which faculty guide students during this professionalization activity are going to be affected by efforts to integrate technology throughout a graduate program. Susan Lang (2002) argues that creating print dissertations puts students at risk for preparing them for a future in the discipline that no longer exists with the increased emphasis on technology in the academy. The adoption of electronic thesis and dissertation initiatives (ETDs), as explained by Jude Edminster and Joe Moxley (2002), has been a significant effort toward using technology for this act of professionalization. However, many ETDs end up being submitted as PDFs, which requires a change in file format, but does not reflect an extensive use of technology that challenges the genre of the print dissertation itself. This challenge is also difficult to face when graduate colleges and institutions require students to submit ETDs in the form of a PDF format. Therefore, support needs to come from graduate programs and institutions if graduate students are going to create ETDs in multimedia formats.

The integration of technology throughout dissertations is not the only concern in association with this professionlization strategy. Members of the field are also invested in understanding how traditional approaches to writing the dissertation should be challenged in addition to integrating technology more effectively. The Dissertation Consortium (2001) responded to a number of questions asking why students are not encouraged to write innovative
dissertations that challenge the norm of the genre and its conventions. Across each author’s response in the Dissertation Consortium (2001) is a theme of identity construction and the tension that exists between forming an identity as an academic making a traditional scholarly contribution to the field and has hopes of landing a tenure track position, and as an individual who is trying to maintain a unique identity as the scholarly identity emerges. For example, Devan and Darrell explain that “[a]lthough the dissertation supposedly involves ‘new’ knowledge, the audience expects to read it in ‘old’ (conventional) ways…Satisfying a committee’s formal expectations by working within traditional forms might well be the easier portion of a candidate’s task” (The Dissertation Consortium, 2001, p. 442). To better incorporate technology throughout the process of completing one’s dissertation, students need support and guidance from committee members who are willing to accept a balance between traditional and non-traditional approaches to dissertation work. As a whole, doctoral programs need to explore more direct means of remediating (Bolter & Grusin, 1999) the dissertation process, the dissertation itself, and graduate programs in the field broadly.

Pre-Tenure Faculty Expectations

Though our understanding of literacy education is changing in the field, what tends to remain the same at many institutions is the tenure and promotion process, which is one crucial component in preparing graduate students for pre-tenure faculty positions. However, institutions differ from each other based on their expectations for tenure and promotion. This creates a challenge for doctoral programs that already integrate technology effectively, and programs that are making new efforts to integrate technology, throughout the professionalization process because their graduates may not find themselves working at institutions with the same values. In response to this challenge, this section describes how graduate programs should keep these
differing tenure and promotion guidelines in mind as they teach students how to sustain their
digital literacy development beyond the doctorate.

While institutions may show increasing support for the use of technology in writing
classrooms, the work of faculty who publish electronically and collaboratively can still be
marginalized in the eyes of tenure committees that still value print scholarship. To prepare
graduate students to work at institutions with these values, doctoral programs need to advise
future faculty members on how to advocate for change while working within the long-held
traditions of tenure and promotion committees. One example that advocates for this type of
change is Kristine L. Blair’s (2007) case for implementing electronic teaching portfolios as
components of the promotion and tenure review process. Using electronic teaching portfolios
creates an opportunity for technologically invested faculty to showcase their merit at institutions
that value teaching and service as equal to the production of scholarly publications. However, it
can still remain a challenge for faculty who need to also prove how their merit is based on
producing scholarship in non-print venues. The process of showing merit through a print or
electronic portfolio is also difficult for pre-tenure faculty who need to make their work with
technology count for tenure because, as Rebecca Rickly (2000) mentions, “most of us [new
faculty] feel ill-prepared for the political, administrative, and professional responsibilities we
will encounter as junior faculty in terms of work with technology, even if we’ve had experience
with these responsibilities before graduation” (p. 21). This is why doctoral programs need to
further examine how they are preparing their graduate students for how they will represent
themselves as scholars to future employers.

For faculty and graduate student technology advocates, like those who specialize in
computers and composition, challenging the traditions upheld by tenure and promotion
committees is difficult but not impossible. For example, Sibylle Gruber (2000) suggests that computers and composition specialists can search for and serve in multiple positions as “outsiders and insiders in multiple worlds—[which] can be used to help enact change in a system that upholds largely traditional values and that often only gives lip service to innovation, diversity, and heterogeneity” (p. 42). Her points resonate with how we prepare graduate students to be members in the field because we may have to consider serving as outsiders and insiders to integrate technology as well as teach students to operate similarly. If we choose not to, we risk repeating the traditional means of tenure and promotion and risk being left behind by technological advancements/changes in the academy. Integrating technology throughout a graduate program is not enough by itself unless we show students how to represent their sustained efforts to other colleagues within institutions that will serve as their future employers.

Researching the Professionalization Process

Based on themes described in this chapter, it’s clear that the integration of technology throughout the professionalization process of doctoral students is complicated. Both faculty and graduate students have a responsibility to engage that process and the extent to which technology is integrated throughout that process. This is why research in this area of the field needs to acknowledge the roles graduate students, faculty members, and graduate coordinators play both inside and outside the classroom. To acknowledge these roles and perspectives, this dissertation examines how the experiences of graduate students and faculty charged with teaching and mentoring those graduate students both formally/informally and inside/outside graduate classrooms influence our understanding of how technology is implemented throughout the professionalization process. Therefore, I use the following research questions to guide my inquiry into doctoral education in the field of Rhetoric and Composition Studies.
• How do Rhetoric and Composition doctoral programs emphasize technology in the professionalization (i.e. the process of acclimating graduate students to their roles as scholars and literacy educators) of their graduate students?

• How are faculty members using technology in their graduate seminars as models for how their students might use technology in their careers?

• How are programs encouraging or facilitating professional development that emphasizes the use of technology and inquiry into the uses of technology for both graduate students and faculty members?

• How are programs providing opportunities for advanced graduate students to advise new graduate students from a technological perspective?

• How is technology integrated during the candidacy exam process?

• What role(s) do electronic dissertations play in teaching graduate students to be technoliterate? How does the creation of these texts teach students how to create other electronic texts?

In the chapters that follow, I explore possible answers to these questions in an effort to reveal the need for doctoral programs to re-evaluate their professionalization strategies. In chapter two, I explain how feminist inquiry can help us understand the ways in which technology integration influences graduate student professional development. As I acknowledge how my position as a graduate student researcher plays various roles throughout the study, I describe how the research methodologies accommodated for my perspective throughout the data collection and analysis. The chapter then concludes with an explanation of how the research questions align with the appropriate methodologies and methods for triangulating the qualitative and quantitative data collected in this study.
In chapter three, I analyze the data collected from Phase I – Bowling Green State University to address my research questions. Conducting a pilot study to gather data about the Rhetoric and Writing Program at Bowling Green State University gave me an opportunity: (1) to assess how my research methods align with my research questions; and (2) to assess how the Rhetoric and Writing Program at BGSU integrates technology through the professionalization process. Under each research question, I provide a summary of the findings, a more detailed analysis, and an acknowledgement of the data limitations. Finally, I conclude this chapter by describing how I made attempts to address the limitations from Phase I as I gathered data for Phase II of my study.

In chapter four, I examine the Phase II data collected from participants in doctoral programs at the University of Louisville, Texas Tech University, and the University of Massachusetts – Amherst. After describing each of the programs, I address my original research questions by using the data collected from Phase II. Under each research question, I provide a summary of the findings, a more detailed analysis, and an acknowledgement of the data limitations. Finally, I conclude this chapter by reflecting on the trends discovered through the data and offering a few suggestions for how doctoral programs should reflect upon their technology integration efforts.

In chapter five, I explain how the data analysis from Phase I and Phase II of the study resulted in the development of benchmarks for programs to consider as they continue to improve graduate education. Overall, I recommend that programs develop strategies to enhance student and faculty awareness about technology integration throughout the professionalization process. This can be achieved by:
• finding a balance between providing structured and less-structured support to students and faculty to accommodate for varying levels of interest with technology integration and changing student/faculty populations; and

• incorporating more regularly scheduled program-level assessment that includes student and faculty perspectives on technology integration while valuing the roles students and faculty play in implementing changes as a result of that assessment.

After providing several practical applications, this chapter concludes by exploring where additional research is needed within the scope of understanding how technology integration can and should function throughout the graduate student professionalization process. It is my hope that this dissertation will prompt graduate students and faculty to evaluate their own programs in an effort to better prepare future faculty for the roles they will play in a digital age.
CHAPTER II. RESEARCHING THE GRADUATE STUDENT PROFESSIONALIZATION PROCESS

Because the graduate student professionalization is a responsibility shared by graduate students, faculty, and administrators with varying perspectives about how it should function, researchers studying this process must use an approach that values those perspectives equally. As a graduate student researching technology integration throughout the graduate student professionalization process, I’ve chosen to primarily use a feminist approach to show how the process is influenced by a variety of contexts and a variety of invested participants (e.g. graduate students, faculty, and writing program administrators). According to Patricia Sullivan (Kirsch & Sullivan, 1992), a feminist research approach uses gender as a starting point for inquiry and challenges traditional approaches for conducting research. Feminist inquiry challenges patriarchal research traditions by acknowledging and embracing the biases of researchers, valuing participants’ roles in the making of knowledge, and incorporating multiple methods and methodologies to show complexity in sites of inquiry. Researchers and teachers also use a feminist approach to alter traditional power dynamics among instructors and students, researchers and participants, and mentors and mentees.

In this chapter, I will explain how feminist inquiry can help us understand the ways in which technology integration influences graduate student professional development. To better understand how feminist approaches can influence the graduate classroom, I will first explain how feminist pedagogy influences digital literacy acquisition and creating/maintaining the mentoring relationships among students and faculty. In the second section of this chapter, and as a means of implementing a feminist approach to inquiry, I will acknowledge how my position as a graduate student researcher will play various roles throughout the study. As I describe my
position, I will explain how I see it benefiting and challenging the study. At the end of this section, I will describe how the research methods and methodologies I’ve chosen will accommodate my perspective throughout the data collection and analysis.

In the third section of this chapter, I will explain how my research questions align with the methodologies and methods to triangulate qualitative and quantitative data. Given the recursive nature of data collection and analysis in feminist research (Kirsch & Sullivan, 1992) and in grounded theory (Corbin & Strauss, 1990), and my goal to understand the professionalization process locally and nationally, this section explains how I conducted my study in two phases. Data in Phase I of the study were collected from the Rhetoric and Writing Program at Bowling Green State University. The data in Phase II of the study were collected from three additional Rhetoric and Composition doctoral programs located throughout the country. I will conclude this chapter by exploring the possibilities and limitations of using these methodologies and methods to study technology integration throughout the professional development process.

**Feminist Pedagogy**

Using a feminist approach to graduate student professional development can work effectively in practice as a number of scholars have mentioned. For example, as I explain in chapter one, the field’s moves toward a stronger emphasis on collaborative relationships among faculty and graduate students in the field (see Lunsford, 2007; Ede, 2004) are influenced by feminist theories of breaking down traditional hierarchies. Though there are several ways to change these hierarchical strategies throughout the professionalization process, these efforts are most likely to begin during graduate coursework. In the first-year composition classroom, feminist pedagogy has already played a role in encouraging collaboration among students and
teachers to support the knowledge making process. For the graduate classroom, a feminist pedagogy is also an important part of helping students think of themselves as members of the scholarly community through collaborative work with their classmates and instructors. This approach also benefits classrooms that integrate technology because students and instructors likely have differing digital literacy skills, which can complicate traditional hierarchical relationships among instructors and students.

Scholars such as Lisa Gerrard (1999) and Christine Tulley and Kristine Blair (2003) have already discussed the benefits of feminist pedagogy in computer-based composition classrooms due to its emphasis on collaboration. Gerrard (1999) writes "Collaborative activity, a strategy of feminist pedagogy, has become routine in composition classes, and computers, in making it easy to share and send files, seem to make group work inevitable, even in non-networked classrooms" (p. 384). Though collaborative work has its benefits, Gerrard (1999) also reminds readers that “while no classroom activity is likely to erase this consciousness of hierarchy [between students and instructors]...networked discussions can give students a much more active and authoritative position than they typically hold” (p. 385). Another method for collaboration in the classroom includes giving students the opportunity to teach the instructor and other students, which can improve reciprocal mentoring strategies. Tulley and Blair (2003) give the example of assigning individual students or groups of students the task of giving software demonstrations as a means to challenge traditional power dynamics. As these examples demonstrate, promoting collaboration is an important component of using a feminist pedagogy in all writing classrooms. While collaboration is beneficial for students developing their digital literacy skills in undergraduate courses, it is even more important for students’ professional development in computer-mediated graduate classrooms.
In graduate seminars, using technology collaboratively can also work to break down the hierarchies between students and instructors in order to help students learn to eventually serve as their colleagues. This is a valuable part of the professionalization process, yet it does not necessarily mean that technology use will lead to teaching graduate students how to adopt the collaborative work ethic that students need to become confident scholars among their future colleagues. For instance, Anson and Miller-Cochran’s (2009) example of using wikis to foster collaboration among graduate students and faculty members did not meet the expectations of the faculty who had hoped for students to adopt collaborative leadership roles. Instead, students deferred to the instructor for guidance due to their strongly developed sense of hierarchy in the classroom. Incorporating feminist pedagogy in a technology-enriched graduate classroom is not without its challenges as this example demonstrates. The system of power between faculty and students is not likely to dissolve completely through the use of collaboration due to differing levels of experience in the field and working within the context of the academic community. However, graduate programs can foster collaboration among graduate students and faculty through technology integration and reflective analyses of the roles students and faculty play in reciprocal mentoring.

For graduate education to integrate technology more effectively, students and faculty need to change some of their assumptions to allow for new opportunities to develop and share knowledge. Blair and Takayoshi (1999) explain technological literacy as a process that is developed, like the writing process itself, in stages involving experimentation. This process, which does not require innate abilities is a more nonhierarchal, nonpatriarchal method through which technological knowledge and
literacy is dialogically defined and negotiated. In addition, it is a process in which the distinction between expert and novice is blurred (p. 10).

Further, this process “Demands more collaborative relationship between teachers and students and between the students themselves” (p. 10). Though Blair and Takayoshi (1999) do not refer to graduate education specifically in their introduction, one can apply the concept of technological literacy as a process to technology-integrated graduate seminars. Hierarchies are most likely to exist during coursework in graduate education because students perceive themselves as novices, who are looking to their instructors as experts in order to acquire knowledge in the field. As Anson and Miller-Cochran (2009) explain, these hierarchies are difficult to break down even with the use of technology in the classroom. Perceptions held by students and faculty about their respective levels of confidence with technology can complicate these hierarchies even further, therefore making collaborative learning and knowledge-making more challenging. For example, some students may underestimate the technological abilities of their instructors or they may overestimate their own knowledge base in the classroom. Some instructors may find themselves overestimating or underestimating their students’ abilities as well. Given these complexities, the use of feminist pedagogy can be immensely beneficial in addressing hierarchies in the classroom through the use of reflective discussion and reciprocal mentoring.

If feminist mentoring is not used, as Haas, Tulley, and Blair (2002) explain in their discussion of a graduate course titled Electronic Discourse and Pedagogy, implementing technology use in the classroom can further reinforce the existing assumptions about mastering new skills. Haas, Tulley, and Blair (2002) suggest the solution that “if we advocate the development of pedagogies that privilege mentoring over mastering, then we must help students and teachers view technological knowledge as a process of nonlinear “play” involving
experimentation and the freedom to make mistakes…” (p. 235). This emphasis on experimentation creates opportunities for students and teachers to share their achievements and difficulties with technology in the form of reciprocal mentoring that creates a more collaborative and supportive environment for everyone in the classroom. Though the article refers to developing one's digital literacy skills, an emphasis on mentoring rather than mastering can be also applicable to graduate students developing their skills as scholars in general. This type of mentoring can create more opportunities for building knowledge among faculty members and students as they share their varying experiences with theory and practice in the field as well as digital literacy skill development.

As more and more graduate programs integrate technology, it will create more opportunities for students and instructors to participate in the type of reciprocal mentoring described by Haas, Tulley, and Blair (2002). For example, if a research methods graduate seminar incorporates the use of a variety of technologies, students can mentor the instructor about those technologies while the instructor mentors the students about the content of the course and her knowledge of the field. Creating more opportunities for students to bring their knowledge about technology to the graduate seminar inspires more opportunities for reciprocal mentoring than in a seminar that uses technology as a peripheral component in the course. This is one example of how a feminist approach works well as a means for integrating technology throughout graduate coursework and the rest of the professional development process.

Other opportunities for using a feminist approach beyond the classroom have been described by scholars Blair and Cadle (2010) and Tulley and Blair (2007). Blair and Cadle (2010) explain how inviting graduate students to serve on the editorial board and to assist with the design of Computers and Composition Online professionalizes students through feminist
mentoring. While a feminist approach can influence graduate education positively, it still has its challenges. For instance, Tulley and Blair (2007) describe how feminist mentoring fostered collaboration between a student (Tulley) and her dissertation advisor (Blair). However, the limitations of the dissertation genre prevented Tulley and Blair (2007) from using this approach to its fullest extent as they studied the digital literacies of adolescent girls within the context of a technology camp. Feminist inquiry can inspire faculty and students to incorporate technology throughout the professionalization process while it can also benefit researchers who study that process. In addition to feminist mentoring being used while integrating technology throughout graduate education, using a feminist methodology can be helpful when examining how graduate education should continue to evolve as it professionalizes the future members of our field.

Researcher Perspective

My discussion of how I used a feminist methodology for this study begins with an analysis of my perspectives. As a feminist researcher, I acknowledge that I can never be objective and that my subjectivity is only problematic to the study if it is ignored. According to feminist scholar Patricia Sullivan (Kirsch & Sullivan, 1992) "The researcher's own race, class, culture, and gender assumptions are not neutral positions from which he or she observes the world but lenses that determine how and what the researcher sees" (p. 56). In this section, I choose to show the lenses through which I will see the data in this study as a means to engage in feminist inquiry. Reflecting on the lenses I use at the beginning and throughout the research process allows me to ethically recognize the connections between my subjectivities and the shape of the study. To do this, I will first describe my subjectivities in general by referring to Kirsch’s (Kirsch & Sullivan, 1992) recommendations for researchers participating in methodological pluralism. This will ground my discussion of how I use feminist methodology,
grounded theory, and context sensitive text analysis to accommodate for how my position as a
graduate student and my educational history will influence this study.

Since I am using a feminist methodology with strategies borrowed from grounded theory
and context sensitive text analysis to gather quantitative and qualitative data, I first turn to
Kirsch’s (Kirsch & Sullivan, 1992) suggestions for researchers engaging in methodological
pluralism. According to Kirsch (Kirsch & Sullivan, 1992), researchers engaging in
methodological pluralism should consider a discussion of: “(1) the researcher's relation to the
subject (the researcher's presence and authority are never neutral); (2) the purpose of the
researcher's questions (they must be grounded in the subject's experience and be relevant to the
subject); and (3) the researcher's agenda (it is never disinterested)” (p. 256). As a graduate
student researching graduate student professional development, I respond to Kirsch's
recommendations in the following ways.

The Researcher’s Relationship to the Subject

In Phase I of my study, the subject is the Rhetoric and Writing Program at BGSU. My
relationship to the program is that I am a fourth-year student working on a non-service
fellowship without administrative or teaching responsibilities. My subjects are students and
faculty in the program. I have worked as a colleague with students and faculty and I've also been
a student in at least one class with every faculty member. In Phase II of my study, the subjects
are students and faculty in Rhetoric and Composition doctoral programs from across the country.
My relationship to these subjects is that they all have the potential to be future colleagues.

The Purpose of the Researcher’s Questions

The purpose of the research questions is to see how technology is and is not being used
throughout the graduate student professionalization process. They are grounded within the
subjects' experiences because both students and faculty have at least felt the need to integrate technology throughout this process if they don't already do so. At the same time, not all students and faculty feel the same urgency toward using technology because not all are invested in research/teaching agendas that focus on computers and writing. Here, my values as a computers and writing scholar are very apparent because the questions are asked based on how I've seen (or how I imagine) technology fitting within the professional development process. All of my questions are limited to how graduate students pursue jobs within the academy and how they prepare for responsibilities that are similar to those of their faculty mentors.

The Researcher’s Agenda

My agenda as a researcher is to find out the extent to which my assumptions are true and to explore ways to negotiate those assumptions with my findings. In general, I expect to find some similarities and some differences between how graduate students view the professionalization process and how faculty view that process with respect to technology integration. I also am invested in this study because I'm still trying to navigate my own professional development process as a graduate student. As I learn more about the process from my subjects and from the texts I read, the more it informs my understanding of my own professional development.

I’ve chosen to respond to these prompts as a general introduction to this section on how I’ll accommodate for my subjectivities throughout the research process. In the rest of this section I develop specific examples for how my interests in computers and writing, my educational history, my teaching experiences, and my position on the job market play a role in the methodologies I use to guide this study.
Being a graduate student who is interested in computers and writing issues as a researcher influences how I interpret the data I gather from my participants. Given that I have more knowledge about research and practice in computers and writing and less knowledge about other areas of the Rhetoric and Composition field (historical, ESL, WAC, WPA, service learning, etc.), I am more likely to assume that these areas all share similar professionalization goals. For example, a computers and writing scholar may need to be professionalized to write digital publications in response to the type of journals interested in computers and writing research. However, an historical Rhetoric scholar might be less likely to need the same skills for writing digital publications due to a reduced number of outlets for digital publication. Knowing that my computers and writing interests are likely to play a role in conducting my research, I participated in the type of critical reflection used by feminist researchers such as Latta (1999) and those implementing grounded theory (Corbin & Strauss, 1990) to recognize how technology integration fluctuates based on the research and practice interests of graduate students and faculty themselves.

In addition to my interests in computers and writing, my educational history as a graduate student has influenced my research. Just like Susan Latta (1999) whose difficulty with adopting the discourse of literary theory influenced her dissertation research, my educational experiences have also influenced my dissertation research. While some graduate students might have started their doctoral programs with masters degrees in creative writing, education, linguistics, or literature, I started my program with a masters degree in written communication with an emphasis in the field of Rhetoric and Composition Studies. Not only are the foci of my masters and doctoral programs similar, but they are also based on programs from mid-sized, midwestern universities with similar professionalization strategies. At both schools, graduate students and
faculty worked collaboratively on administrative, teaching, and research tasks. Both schools used technology throughout graduate coursework, though it was sometimes used as a peripheral component. In both cases, the majority of technology use was dedicated to a single graduate seminar that covered research and practice in computers and writing. Also, both programs gave me the opportunity to teach in computer labs and to implement places for students to adopt new digital literacy skills. At the same time, technology use was not a department-wide requirement for teaching all courses. In this study, the schools in which my participants teach may have more or less access to the same amounts of technology in comparison to my experiences.

Since I have had both positive and negative experiences as a teacher and a student working with technology, I had to be aware of how my analysis reflected comparisons between my experiences and the experiences of my participants. In computers and writing research, Takayoshi (2000) explains the limitation of “person-based research.” She writes, “many of the stories we tell in computers and composition scholarship, examples of either positive or negative experiences with technology, are told as relatively coherent renderings from the teacher’s perspective” (the students' perspectives are not included) (Takayoshi, 2000, p.128). Keeping this in mind, I was careful not to primarily emphasize either the positive or negative experiences offered by participants in the study. I also avoided measuring either the positive or the negative experiences of the participants against my own experiences with technology. Instead, I accommodated for a more balanced analysis. This allowed me to identify places where I had inadvertently compared the data to what I had subjectively constructed as an “ideal” integration of technology throughout graduate education. Then I was able to negotiate the differences between analyses that are dependent on and removed from my comparisons to the “ideal.”
My experiences in both graduate programs have prompted me to expect technology to play a similar or more integrated role in graduate education, yet this subjectivity could become problematic if I do not engage in critical reflection throughout the research process. This is why I offered participants the opportunity to review my analysis of the data I had collected from them. In feminist research, this strategy allows me to break down the hierarchy between the observer and the observed thus leading to additional insights (Kirsch & Sullivan, 1992, p. 262). Not only does this strategy lead to more developed analyses, but it also treats participants in a more ethical way. Participants should have access to the interpretations of the researcher throughout the data collection according to Newkirk (1996). To treat participants ethically and to responsibly accommodate for my subjectivities, I had to consider my relationship with my participants while remaining aware of the "ethics of reciprocity" as Powell and Takayoshi (2003) explain them. According to Powell and Takayoshi (2003), “If we want authentic reciprocity, research participants should be allowed to construct roles for themselves and us in the same way we construct roles for them” (p. 398). For example, I had originally made assumptions about how the study would benefit the participants in Phase I and how it would benefit them in Phase II, but these assumptions were not as useful to the study as the assumptions of my participants. Therefore, as I offered opportunities for participants to see my analysis and to revisit their responses in their surveys and interviews, I asked them how it could benefit them beyond the study and how they saw my role even though it was already defined as the researcher. It is possible that my identity as a graduate student researcher influenced the way in which the participants saw the study as beneficial to them. This is something that I had to continually reflect upon as I received the participants’ perceptions of the study and its benefits.
Also, my position as a graduate student on the job market influences my analysis of the data both positively and negatively. Since I was looking through a number of job postings on the MLA Job List, HigherEdJobs, and The Chronicle, I was able to gather insight about the current demand for technologically confident faculty. At the same time, I was more likely to closely examine postings that were related to my qualifications and interests in computers and writing. This could have prevented me from seeing the demand for technologically confident faculty in jobs that pertain to other areas of the Rhetoric and Composition field. Further, participants could have easily been on search committees at institutions where I was a job applicant. In this case, my interest in getting hired could have caused me to analyze the data more favorably than if I didn’t have a stake in working at that institution. It could have also created a situation where I responded unfavorably due to a search committee rejecting my job application. As I analyzed data in the study, I had to critically reflect on how my data analysis was influenced by my position on the job market.

Aligning the Research Questions with the Methodologies and Methods

In this section, I will first explain how my research questions align with the methodologies and methods to triangulate qualitative and quantitative data. Using primarily a feminist methodology with aspects of grounded theory and context sensitive text analysis allows me to gather data about the complex nature of professionalization. Since there are a number of strategies that aid in the professionalization process, it is necessary to use multiple methodologies and methods that accommodate for the variety of contexts in which these activities occur. Given the recursive nature of data collection and analysis in the methodologies I’ve chosen, and my goal to understand technology integration throughout the professionalization process locally and nationally, this section then explains how this study was conducted in two
phases. Finally, I will conclude this section and this chapter by exploring the possibilities and constraints of using these methodologies and methods to study technology integration throughout the professional development process.

As explained in chapter one, my research questions stem from an effort to understand technology integration throughout professional development inside and outside the classroom over the course of one’s graduate education. In addition to my overarching question about how technology is integrated throughout this process, using a feminist methodology with aspects of grounded theory and context sensitive text analysis allowed me to also address the following research questions:

- How are faculty members using technology in their graduate seminars as models for how their students might use technology in their careers?
- How are programs encouraging or facilitating professional development that emphasizes the use of technology and inquiry into the uses of technology for both graduate students and faculty members?
- How are programs providing opportunities for advanced graduate students to advise new graduate students from a technological perspective?
- How is technology integrated during the candidacy exam process?
- What role(s) do electronic dissertations play in teaching graduate students to be technologically literate? How does the creation of these texts teach students how to create other electronic texts?

By asking how programs are achieving various tasks, my research questions align with the ways in which these methodologies value context. In the spirit of grounded theory, each question leads me to the trends that exist in each program and across multiple programs rather than testing each
program against a hypothesized strategy for technology integration. Each question also accommodates for a variety of perspectives on each part of the professionalization process. These questions align with a feminist methodology because they provide an opportunity to look at the views of graduate students, faculty, and program administrators equally rather than reinforcing the traditional hierarchies among these participants. These questions also align with context sensitive text analysis because they allow me to gather data based on each program’s professionalization artifacts rather than based on my view or the field’s view of what texts should be used throughout the professionalization process. Guided by the methodologies I’ve mentioned above, I’ve chosen to study the answers to these questions by gathering data from surveys, interviews, and various texts such as course syllabi and program handbooks. Each of these methods is important to the study since they were used to gather quantitative and qualitative data, which was then triangulated to provide a detailed analysis of how programs are integrating technology throughout the professionalization process. In the following sections, I describe how I used these methods in two different phases of the study.

**Phase I: Bowling Green State University’s Rhetoric and Writing Program**

To test my methods prior to using them with participants from several institutions, I have conducted the study in two phases. Phase I of the study was conducted at Bowling Green State University by working with participants from the Rhetoric and Writing Doctoral Program. Though the Phase I participant sample is different from the Phase II sample, the methods are the same for both phases. In Phase I, I recruited participants from a population of faculty advisors, graduate coordinator/writing program administrators, and graduate students from the Rhetoric and Writing Doctoral Program at Bowling Green State University. The sample of faculty advisors, graduate coordinators/writing program administrators, and graduate students reflects
varying levels of comfort with technology. An ideal sample of graduate students would be a collection of first-years, second-years, third-years, and fourth-years in order to show responses from students at various points in the professionalization process. However, after recruiting participants via email using the program’s mailing list, I was able to gather a sample of three second-year students, five third-year students, one fourth-year student, three faculty advisors, and two graduate coordinators/writing program administrators for a total of 14 participants.

After distributing and collecting an informed consent information sheet, faculty advisors, graduate coordinators/writing program administrators, and graduate students from BGSU were asked to complete an online survey. Participants were expected to spend no more than 20 minutes completing the survey about how technology is integrated throughout their program as a means for professionalizing graduate students both inside and outside the classroom. The survey questions were a combination of multiple choice, Likert scale, and open-ended questions to gather both quantitative and qualitative data. At the end of the survey, participants were asked if they’d be willing to be contacted for a follow-up interview. Of the 14 survey participants, nine opted to complete the follow-up interview. Faculty members were asked to submit at least one syllabus or a course description for a graduate course that shows how they’ve integrated technology. Of the five faculty participants, four submitted syllabi from courses they had taught in the Rhetoric and Writing Program.

Participants opting to complete the follow-up, 20-minute interview were asked five questions based on their responses to specific survey questions. The purpose of the follow-up interview was to gather more qualitative data and to prompt participants to reflect on the responses they gave to the survey questions. Of the 14 participants, nine completed follow-up surveys. After analyzing the data from Phase I of my study, I shared my analysis and the results
of the textual analysis, the surveys, and the interviews with at least one randomly-selected participant from each category (one graduate student, one faculty member, and one graduate coordinator or administrator). The purpose of sharing the results and my analysis of the results is to acknowledge my biases as a researcher and to acknowledge the perspectives of the research participants at the same time. This strategy aligns with the nonhierarchical components of feminist methodology, which were identified earlier in this chapter.

After an initial look at the survey and interview responses from Phase I, I chose to reformat some of the survey and interview questions to gather a broader range of data. Instead of gathering quantitative and qualitative data from the survey, I chose to gather primarily quantitative information. The revised interview questions ask participants to provide anecdotal information (qualitative data) about how they’ve integrated technology throughout the professionalization process. With the revised survey and interview questions, I was able to triangulate the data more effectively during Phase II of the study.

*Phase II: Rhetoric and Composition Programs from across the Country*

In Phase II, the goal was to recruit participants from five Rhetoric and Composition doctoral programs located across the country. Since doctoral programs in the field vary in size, student population, sources of funding, and number of years maintaining a doctoral program in Rhetoric and Composition, and strategies for educating their students, I randomly selected programs based on geographical region. Each program listed in the 2007 Survey of Doctoral Programs in Rhetoric and Composition (Brown, Enos, Reamer, & Thompson, 2008) was put into one of the following regional categories: East Coast, Midwest, Southeast, Southwest, and West Coast. From each category, I randomly selected one program and then contacted the writing program administrator for that school in order to recruit participants from a population of faculty
advisors, graduate coordinators/writing program administrators, and graduate students. Due to
time constraints and difficulty recruiting participants, only three doctoral programs were
represented in Phase II of the study.

Like the process of selecting participants in Phase I, the sample of participants in Phase II
would ideally be a collection of faculty advisors, graduate coordinators/writing program
administrators, and graduate students with varying levels of comfort with technology. Though it
was attempted to gather a sample of graduate students at various points within their programs, the
majority of the participants who responded were in their first or second year of study. I was,
however, able to gather a sample of two masters students, five first-year students, three second-
year students, one third-year student, two faculty advisors, and one graduate coordinator/writing
program administrator for a total of 14 participants. Once the participants were recruited, I
distributed an informed consent information sheet to potential participants electronically and via
mail, then I gave them the opportunity to ask questions via e-mail before signing and returning
the consent form by mail.

When I received the consent forms, faculty advisors, graduate coordinators/writing
program administrators, and graduate students from each of the three institutions were then asked
to complete an online survey. Participants who opted to be contacted for the follow-up interview
received the interview via email. At least one faculty advisor or graduate coordinator/writing
program administrator from each institution was asked to give me access to the following data:
(1) the course descriptions/syllabi of required courses; and (2) descriptions of professional
development/mentoring workshops/meetings/activities conducted outside the classroom.

After collecting and analyzing the data from Phase II of my study, I shared my analysis
and results of the textual analysis, the surveys, and the interviews with members of my
committee in order to acknowledge my subjectivities as a researcher. Originally, it was my intention to share the analysis with participants from Phase II of the study but time constraints and participant willingness to engage in this activity prevented me from doing so. Given these limitations, the data analyses in chapters three and four of my dissertation still however accommodate for my subjectivities by acknowledging the benefits and challenges of my recommendations.

Aligning the Survey and Interview with the Research Questions

As I explained in chapter one, my research questions stem from looking at how technology is integrated throughout a variety of strategies used to professionalize graduate students. Though my research questions have remained the same throughout the study, the survey and interview questions have been modified between Phase I of the study and Phase II of the study. These modifications were made to gather both quantitative and qualitative data that would be more in line with the guiding research questions in the study.

Figure 1. Aligning the Survey and Interview Questions

<table>
<thead>
<tr>
<th>Study</th>
<th>Survey Question</th>
<th>Interview Question</th>
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<tbody>
<tr>
<td>Phase I</td>
<td>5. Technology resources are readily available and accessible for use inside and outside the classroom. (Likert scale)</td>
<td>2. Based on your responses to questions six through eight, how would you characterize your level of comfort with using technology as it’s situated among your research, teaching, and professional development activities?</td>
</tr>
<tr>
<td>Phase II</td>
<td>9. Please indicate the extent to which you agree or disagree with the following statements by filling in the blank with the following options. As future faculty, graduate students are prepared to integrate technology</td>
<td>4. What types of activities and support from your colleagues, your program, and/or your institution motivate you to further develop your technoliteracies as a teacher, researcher, and/or administrator in</td>
</tr>
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</table>
throughout their roles as ___________.
(teachers, researchers, administrators)
Likert scale

5. How have the experiences you’ve mention above (and/or other experiences not mentioned here) influenced your understanding of how technology should be integrated throughout the graduate student professionalization process?

| Research Question: How are faculty members using technology in their graduate seminars as models for how their students might use technology in their careers? |
|---|---|
| Study | Survey Question | Interview Question |
| **Phase I** | 3. Same as question #3 in Phase II.  
4. Explain how you’ve used technology in these courses. | |
| **Phase II** | 3. Which of the following graduate courses do you teach/or have you taken? (Check all that apply) History of Rhetoric, Pedagogy, Research Methods, Computers and Writing, Writing Assessment, Writing Program Administration, Writing Across the Curriculum, Basic Writing, Scholarship and Publication, Discourse Analysis, Literacy, Linguistics, Professional/Technical Writing, Writing Center Administration, Other (please specify)  
4. I have used the following technologies in at least one of the graduate courses I’ve taken/taught. Check all that apply. Course management software, reference database software, podcasts, blogs/wikis/etc., social networking sites, video sharing sites, email, IRC software, web-authoring software, other. | 1. Describe a situation where you used technology in a graduate course (as a teacher or as a student) to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)? |

| Research Question: How are programs encouraging or facilitating professional development that emphasizes the use of technology and inquiry into the uses of technology for both graduate students and faculty members? |
|---|---|
| Study | Survey Question | Interview Question |
| **Phase I** | 6. My program and/or institution creates opportunities for faculty and graduate students to develop and sustain their technology skills outside the classroom. (Likert scale) | 1. With regards to question five, how do you negotiate the level of availability and accessibility of technology at your institution with your own ideal strategies for |

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<table>
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<tr>
<th>Study</th>
<th>Survey Question</th>
<th>Interview Question</th>
<th>Research Question: How are programs providing opportunities for advanced graduate students to advise new graduate students from a technological perspective?</th>
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<tr>
<td>Phase I</td>
<td></td>
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<tr>
<td>Phase II</td>
<td>6. Advanced graduate students are given opportunities to advise new graduate students on technology use in the following areas. Check all that apply. Teaching, completing coursework, preparing conference presentations, preparing publications, taking candidacy exams, dissertation work, preparing for the job market.</td>
<td>2. Describe a situation where you used technology (as a student or as a faculty advisor) to achieve a specific professional development goal(s) (e.g. for a conference presentation, a publication, committee work, administrative work, etc.). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)? 4. What types of activities and support from your colleagues, your program, and/or your institution motivate you to further develop your technoliteracies as a teacher, researcher, and/or administrator in the field? Why?</td>
<td>Research Question: How is technology integrated during the candidacy exam process?</td>
</tr>
<tr>
<td>Study</td>
<td>Survey Question</td>
<td>Interview Question</td>
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<tr>
<td>Phase I</td>
<td></td>
<td></td>
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<tr>
<td>Phase II</td>
<td>7. Technology is integrated throughout the candidacy exam process in the following</td>
<td>3. Describe a situation where you used technology (as a student or as a faculty advisor) to achieve a specific professional development goal(s) (e.g. for a conference presentation, a publication, committee work, administrative work, etc.). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?</td>
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ways. Check all that apply. Notifying graduate students of how the exam process works, studying for exams, taking exams, assessing exams, other. faculty advisor) in the candidacy exam or dissertation process to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?

**Research Question:** What role(s) do electronic dissertations play in teaching graduate students to be techno-literate? How does the creation of these texts teach students how to create other electronic texts?

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<th>Study</th>
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<tr>
<td>Phase I</td>
<td>8. Technology is incorporated throughout the dissertation process. Likert scale.</td>
<td>3. Describe a situation where you used technology (as a student or as a faculty advisor) in the candidacy exam or dissertation process to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?</td>
</tr>
<tr>
<td>Phase II</td>
<td>8. Technology is incorporated throughout the dissertation process in the following ways. Check all that apply. Correspondence among doctoral candidates and committee members, distributing and providing feedback on chapter drafts, gathering and organizing source material, drafting the dissertation, defending the dissertation, depositing the dissertation, other.</td>
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Based on the alignment of the research questions with the survey and interview questions from Phases I and II, one can see that there are research questions that were not covered by the methods in Phase I but are covered by the methods in Phase II. This was one of the limitations of the data collected from Phase I, but was not a limitation in Phase II. While reflecting on the methods used in Phase I led to a more effective use of the methods in Phase II, there are still a number of possibilities and limitations to this study as I explain in the following section.

**Benefits and Limitations of Using these Methodologies and Methods**

Though this study provides additional information about technology integration throughout the professional development process, there are a number of limitations associated with using these methodologies and methods. First, there are 67 doctoral programs in Rhetoric and Composition Studies (Brown, Enos, Reamer, & Thompson, 2008) and this study gathered
information from four doctoral programs. Given the relatively small scope of this study, there are a number of conditions that prevent me from making broader generalizations about technology integration throughout graduate student professional development in the field. For example, focusing on only four programs in the field could skew the results of the study depending on how large the programs are, how long they’ve offered their doctoral programs, what faculty members specialize in throughout those programs, and how much funding those programs receive. Though the results of the study are limited to understanding the individual programs, closely examining a smaller number of graduate programs helps us understand technology integration in more detailed ways. Looking at the patterns that arise throughout the data collections gives other researchers an opportunity to look for patterns that are similar to and/or different from those that developed among these four programs.

As for the specific data collected from each program, there are also limitations to analyzing syllabi as representations of graduate coursework and technology’s role in the classroom. For example, not all syllabi explain every assignment and class activity in detail. In cases where instructors may see technology use as peripheral to the content in the course, they may not include descriptions of that use even though they are using it to achieve a goal in the classroom. Further, instructors have been known to make amendments to their syllabi during the semester. In these cases, gathering syllabi at the beginning of the semester may not completely reflect technology use that was added later in the semester in an amended portion of the syllabus. Also, researching syllabi as the only source for textual analysis in the study does not give me insight into the other documents that are used within the department (like the graduate handbook). Though department documents can be more general than what one would find in a
While all of the above limitations are in reference to syllabi analyses, there are also limitations if faculty choose to opt out of sending me their syllabi. Some may be apprehensive about sending their personal syllabi to a researcher they have never met in person. Others may be less willing to part with their syllabi, as one faculty member was apprehensive about in Phase I of the study, due to what they perceive as a lack of technology integration in their classroom. Though these are limitations to analyzing syllabi to see how faculty are integrating technology throughout their coursework, the syllabi that I did collect offered information that I triangulated with the data collected through the surveys and interviews. Putting together the syllabi I received and the survey and interview responses from each program created a more detailed context for each program and how it integrates technology throughout the professionalization process.

In addition to the limitations of collecting syllabi and studying four graduate programs, it was also difficult to get a broad view of graduate student experiences throughout the professionalization process. Conducting surveys and interviews with graduate students who are at various points in their programs gave me a variety of perspectives on technology integration throughout the professionalization process. However, I’m not following the same students over the course of their graduate school careers so the data does not show how technology integration changes from year to year within an individual student’s experiences. In a similar vein, it was difficult to get graduate student participants from every year within the program. Conducting the data collection during the fall semester limited the number of first-year students participating in the study since they might not have felt confident enough or acclimated to a program enough to respond to the survey/interview in great detail. Also, the survey and interview questions do not
examine the educational backgrounds of every participant. This isolates my findings to what happens in the programs themselves rather than including how one’s previous experiences with technology integration influence their experiences throughout the graduate student professionalization process.

Just as the study faced the challenges of getting data from participants at a variety of stages in the professionalization process, this study also was limited to gathering data to show how graduate students are professionalized for careers as faculty. This study therefore reveals more about professionalizing graduate students for tenure track positions, similar to those held by their advisors, and less about preparing students for other academic positions or careers beyond the university. Though there are limitations to taking this approach, maintaining a close study of the professional development processes associated with academic careers works within the time and space constraints of a dissertation. Further, the results of this close study serve as a starting point for future research that examines how and why we should professionalize students for careers unlike those held by their advisors and careers outside the university.

Finally, my position as a graduate student creates both possibilities and limitations for this study. Since I do not have first-hand experience as tenure-track faculty member, I am using my research and my experiences working with faculty members to speculate about the activities a faculty member is expected to engage in during her departmental position. This made it difficult for me to see the same connections between professional development and faculty responsibilities as a faculty member would during my analysis of the data. On the other hand, working within a graduate program allows me to experience the professional development process first hand as a student. Sharing my analyses with participants in the study as well as
faculty on the dissertation committee helped me address the benefits and limitations of my position as a graduate student.

Some participants, however, were less willing to review my analysis of the data I’ve collected from them when given the opportunity. This could have been due to not playing an initial role in developing the study as a researcher. The hierarchies that traditionally exist between researchers and participants are likely to still be prevalent in the minds of the participants regardless of my attempts to break these traditions through my methodology and methods. Also, participants may have not be interested in reviewing my analysis due to time constraints or not feeling invested enough to provide a response to my analysis. This could have created challenges for me as I acknowledged how my subjectivities affected my data analysis. Fortunately, with the support of my committee chair and other committee members I was able to analyze the data while acknowledging my subjectivities.

With the number of benefits and limitations to this study, using a feminist approach is the most effective way for me to find a balance among acknowledging and embracing my values as a researcher, valuing participants’ roles in the making of knowledge, and incorporating multiple methods and methodologies. In the following chapters of this dissertation, this approach will reveal the complicated nature of the graduate student professionalization process. Analyzing data that has been reviewed through my lenses as a researcher and the lenses of the participants shows patterns of similarities and differences in professionalization processes across programs and individuals. Once these patterns have been identified, graduate programs, students, and faculty can begin to better understand how to continue to improve technology integration throughout the professionalization process.
CHAPTER III. THE BGSU RHETORIC AND WRITING DOCTORAL PROGRAM

In this chapter I begin by contextualizing the data collected from Phase I by providing a description of the Rhetoric and Writing Program at Bowling Green State University. This approach is useful in feminist research because it acknowledges that data and the analysis of that data reflect an environment with participants and a researcher who all have various subjectivities. Rather than ignore these subjectivities, I embrace them as “lenses” as feminist scholar Patricia Sullivan (Kirsch & Sullivan, 1992) suggests while considering the lenses the participants use to view the role technology plays in graduate education. Further, the description of this program will show how the data in Phase I are distinguished from and aligned with the data from Phase II as I describe in chapter five, thus emphasizing that the professionalization process is strongly influenced by attributes that vary among graduate programs. Though there are limitations to how the data can be analyzed and understood within the context of a specific program, learning where programs have similarities and differences in approaches can show more about the graduate student professionalization process functions throughout the field of Rhetoric and Composition Studies. After describing the program, I address my original research questions by using the data collected from Phase I. Under each research question, I provide a summary of the findings, a more detailed analysis, and an acknowledgement of the data limitations. Finally, I conclude this chapter by describing how I made attempts to address the limitations from Phase I as I gathered data for Phase II of my study.

Description of the Graduate Program

The Rhetoric and Writing Doctoral Program was created in 1980 and is located at Bowling Green State University (BGSU), a mid-sized, public institution in northwest Ohio. According to the Rhetoric Review’s 2007 Survey, there are eight core faculty members and 39
students within the program (Brown, et al., 2008). Graduate courses are taught mostly in traditional classrooms with audio/video cabinets; however some are taught online and one required course (Computer-Mediated Writing Theory and Practice) is taught solely in a computer lab. While the location of seminar courses creates challenges for integrating technology, digital work is still valued as a learning outcome as “Graduates are prepared theoretically and practically to work in computer environments.” In addition to support in the classroom, students receive professional development guidance from monthly meetings designed for students at various stages within the program. Third-Friday group meetings assist first and second-year students with learning about the program and strategies for presenting at regional and national conferences. There are also two Post-Prelim groups with meetings that are held separately for third-year and fourth-year students. These groups provide support for students preparing for their candidacy exams and graduate lectures as well as students writing their dissertations while on the job market. More forms of professional development support are available as students are encouraged to continue developing e-portfolios beyond the classroom as job market tools once they have created them in the required Computer-Mediated Writing Theory and Practice course.

As for financial support, most of the students receive funding in exchange for teaching first year composition courses, working in the writing center, or working as research assistants. Prior to the 2008 academic year, first-year composition classes were taught primarily in traditional classrooms with the option of reserving computer labs a few times a semester. In fall of 2008, the General Studies Writing Program created several laptop sections for the first-year composition courses and all graduate student instructors were required to teach these sections. Students who receive funding for work in the writing center have opportunities to participate in

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1 Since the survey was conducted, the Rhetoric and Writing Program has changed its core faculty to seven.
virtual writing conferences as well as create resources through the online writing center in Second Life. In addition to the opportunities for technology integration in the classroom and the writing center, graduate students have opportunities to serve as section editors for the online journal *Computers and Composition Online*, which is edited by one of the program’s core faculty members, Kristine Blair. In these positions, students correspond with the authors who submit digital texts for review while consulting with Kristine Blair to determine if the texts are appropriately fit for external peer review and potential publication. Students also represent the journal by approaching potential authors at conferences who have given presentations on topics that would fit well with the journal’s goals.

Beyond the English Department and the General Studies Writing Program, graduate students and faculty have access to the Center for Teaching, Learning and Technology (CTLT). CTLT recently changed its name to the Center for Teaching and Learning (CTL) and provides workshops and one-on-one support for all BGSU faculty and graduate student instructors who want to improve their teaching through the use of various technologies. Graduate students also have access to the Student Technology Center (STC), which provides software tutorials and workshops geared toward the BGSU student population. BGSU also provides more in-depth, month-long, free of cost technology training courses for BGSU employees, including graduate students, through the Continuing & Extended Education and Information Technology Services. These resources, as well as others available within the English Department, position the Rhetoric and Writing Program on a relatively technology-rich campus. Just as individual student interest and encouragement from faculty have an influence on technology integration throughout the professionallization process, so does the availability of resources such as these.
In addition to the availability of on-campus technology resources, there are a number of other variables that likely had an influence on the data collected from Phase I of this study. First, it is possible that some students were more likely to agree to participate in the study than others when they received the initial recruitment email. Because the recruitment email explained that the study pertained to gathering information about technology integration in graduate education, some students may have chosen to participate based on being already interested in the research subject. Further, my goal was to recruit student participants at different stages within the program. Unfortunately, students in their first-year of the program did not agree to participate. This could be a combination of time constraints, including unfamiliarity with the program due to collecting data in the fall semester, unfamiliarity with me as the researcher, and a number of other unknown reasons. All of the student participants from Phase I of the study had taken at least one graduate seminar course with me. Aside from first-year graduate students being not included in the Phase I sample, part-time graduate students in the program are also not included due to not responding to the recruitment email.

Graduate student and faculty participants may have also opted not to participate in the study due to their perceptions of what it means to integrate technology throughout graduate education, though there could be a number of other reasons as well. A student or faculty member may perceive that she is not integrating technology because she is not using the most popular, up-to-date, or high-tech practices in her teaching and research when in fact she is still integrating technology in a meaningful way. The pressure to be an expert on technology integration is complicated by what Angela Crow (2006) suggests for advanced faculty members who need to learn how to situate themselves as learners rather than experts on techno-literacies. Even if an advanced faculty member is still learning to develop these skills it does not automatically mean
that she is not contributing to technology integration throughout the graduate student professionalization process. As I explain in my analysis of the data collected in Phase I, the perceptions of what is considered technology integration has an influence over participants’ willingness to continue developing their techno-literacies as part of graduate education.

In each of the sections that follow, I include one of my research questions followed by a brief summary of the trends I noticed while analyzing the data collected from Phase I. Each summary serves as an introduction to how the data provide responses to each research question within the context of the Rhetoric and Writing Doctoral Program at BGSU. At the end of each section, I explain how the data raise questions to be addressed in Phase II of the study.

How Do Rhetoric and Composition Doctoral Programs Emphasize Technology in the Professionalization of their Graduate Students?

Summary of Trends

Based on the responses from the survey and interview questions, students in general feel that technology is available and accessible for teaching and research at BGSU. Still, they describe discrepancies between what is available and accessible to graduate students and undergraduate students. For example, most graduate seminars are held in classrooms with technology cabinets, whereas most first-year composition courses are designated as laptop sections or are taught regularly in computer labs. This is, of course with the exception of the required computers and writing graduate course, which is taught solely in a computer lab. Even though graduate seminars aren’t typically taught in computer labs or through the in-class use of laptops, students indicate that they still feel supported by faculty and other students within the program in terms of developing their digital literacy skills. One of the challenges students face
with integrating technology throughout the professionalization process is being able to make time for enhancing these skills given the standard workload they face as students.

Like the graduate student participants, various faculty members in the Rhetoric and Writing Program feel that there is a lot of support available for integrating technology throughout the professionalization process. For example, faculty members refer to university-wide technology services such as the CTL and the STC as places for faculty and students to find the support necessary for advancing their digital literacy skills. One of the most prominent trends among faculty responses is the importance of mentoring graduate students based on their research interests. Student research interests greatly influence the extent to which faculty members integrate technology throughout their roles as mentors to those students. Finally, a number of faculty participants, as well as student participants, indicated an interest in developing program-specific technology workshops to add to the resources already available university-wide. The reasoning behind this interest is so that faculty and students can benefit from sharing their experiences with each other about integrating technology within their work in the field.

Analysis

When student and faculty participants were asked to rate their level of agreement with the statement, “Technology resources are readily available and accessible for use inside and outside the classroom,” from strongly agree (1) to strongly disagree (6), their responses confirmed that the Rhetoric and Writing Program and BGSU see value in making these resources available to students and faculty. Except for the 26.7% of student participants who gave a rating of (3), all other students and faculty gave ratings of (1) or (2). This overwhelmingly positive assessment of program and university resources is promising, yet the quantitative data only answers part of this research question. Student and faculty participants’ comments on the survey and the responses to
the interview give a more detailed description of how technology is integrated throughout the professionalization process.

As novice teachers, graduate students’ experiences working in the first-year writing program influence how technology will be integrated throughout their pedagogy once they graduate from the program. Many student participants acknowledged the differences between teaching first-year writing courses where their undergraduate students were required to use their laptops and learning through graduate seminars where laptops were used based on student preference. Not only is laptop use based on student preference in graduate seminars, it also seems in general that student and faculty participants find the extent to which technology is integrated is based on the individual goals of each student. This approach has several benefits to students and faculty because it allows them to maximize the time they have for developing the skills they need based on their interests and how they want to represent themselves inside and outside the graduate program. It can also create a greater network of support because the students with shared interests know they can also turn to each other as they develop their technoliteracy skills. One student participant explained her level of confidence with technology integration by saying, “I am also lucky enough to be surrounded by others that are interested in very different types of technology and that are willing to discuss them.” In contrast, the limitations to this approach include the risk of having students with less interest in technology integration who may find it more difficult engage in technology-based professional development after graduate school. These strengths and limitations are important to how one thinks about technology integration throughout the graduate student professionalization process, and they raise the questions as to how a graduate program might try to create a better balance among various
approaches to meaningful technology integration. This is why I explore these questions in more
detail throughout the following sections of this chapter.

Adding to the interest-guided approach to technology integration is how time influences
the ability for programs to emphasize technology throughout the professionalization process. For example, one faculty member explained how the available times for university-based workshops
at the CTL usually conflicted with her teaching responsibilities because most graduate seminars
are held in the afternoon or evening. In this case, the CTL workshop schedule made it difficult
for her to continue to develop her digital literacy skills even though she had a desire to learn
more. Some students and faculty suggested that the Rhetoric and Writing Program offer
program-specific technology workshops to improve the scheduling issues inherent in the
university-wide workshops. In theory, offering program-specific workshops would provide more
opportunities for students and faculty to mentor each other. As one faculty comments, “Ideally
we’d have the time, space, and mental energy to sustain monthly workshops where faculty and
students would lead discussion on various 2.0 tools. I would love that.” In the past, the Rhetoric
and Writing Program has offered workshops for students and faculty that were useful though
only a few attended, which led to canceling any future workshops. The challenge of motivating
students and faculty to attend technology-focused extracurricular activities is most likely shared
throughout other programs and departments even though it has been suggested that programs still
create these opportunities. Scholar and advanced faculty member Debra Journet (2007) advises
departments to offer “longer, intensive experiences that balance theory and practice and provide
support for first-timers and that make learning pleasurable” (p. 117). Knowing the time
constraints students and faculty face, it may continue to be a challenge in programs that are still
exploring how to integrate technology in addition to the current strategies being used.
Limitations

The data collected from these participants show that accessibility does not necessarily promote meaningful technology integration. It also indicates that making technology accessible to students and faculty creates a supportive environment for technology integration throughout the professionalization process, but it only shows the support in general. This is one of the drawbacks to asking participants to answer such a general question about accessibility when trying to understand a more detailed use of technology integration in graduate education. In an effort to gather more specific data to answer this research question, I modified some of the survey and interview questions for use in Phase II of the study. For the overall question about technology integration throughout the graduate student professionalization process, I asked participants to choose specific types of technology from a list of options to gather more detailed data about technology use in the graduate courses they’ve taken or taught. In the following sections, I describe how and why I modified the survey and interview questions correlate better with my research questions in Phase II.

How Are Faculty Members Using Technology in their Graduate Seminars as Models for How their Students Might Use Technology in their Careers?

Summary of Trends

The student responses to the survey questions show that graduate seminars generally depend on the use of a course management tool like Blackboard and the use of blogging to assist with learning the requirement material. The required computers and writing seminar serves as an exception to this trend because it uses a wide range of technologies to teach the subject matter. A few graduate seminars are offered online at BGSU for credit within the Rhetoric and Writing Doctoral Program. Based on student responses, these courses depend solely on Blackboard to
deliver course material while incorporating the use of the discussion board and occasionally the use of the synchronous/asynchronous chat room component.

Similar to the findings from student participants, faculty participants explain in their survey responses that they rely primarily on Blackboard to integrate technology in the graduate seminars they teach. Some participants mentioned that other Web 2.0 technologies are linked to the Blackboard sites they use and that these technologies are usually used for reading assignments. Like student participants, faculty participants referred to the required computers and writing seminar as the one course that integrates technology more extensively than the other graduate courses. Aside from using technology in the graduate seminars, faculty responses indicate that email is extensively used to mentor students during the preliminary exam and dissertation stages. This technology is considered essential for advising students who are writing dissertations while living at great distances from campus.

Analysis

Technology use in graduate seminars models how graduate students can integrate technology throughout their roles as teachers and researchers. For example, primarily using a course management tool like Blackboard models that Blackboard could be used in similar ways, as indicated below, when teaching in the future to graduate students. In addition to the trends among the student and faculty responses, the following list shows how four faculty participants integrate technology in the syllabi, assignments, and course descriptions based on the materials they submitted to me for this study. Though not demonstrative of every instance of technology use, the data include the most dominant or regularly used technologies for each course.

- Writing Assessment: students provide analyses of weekly readings on individual blogs and each week a student takes notes from class then posts them to the course blog.
• Research Methods: each student maintains a research blog throughout the semester to assist with the completion of a research project proposal (similar to a dissertation prospectus) and each week a different student takes a turn posting class notes to the course blog.

• Teaching of Writing: Blackboard, course management software, is used for the online version of this course. Students use the discussion board to critique weekly readings and are expected to reply to each other several times. In groups, students also facilitate the discussions online each week. The teaching unit/plan assignment is fairly open and leaves the choice of technology integration up to the discretion of each student.

• Writing Program Administration: students keep a reading notebook electronically that is printed out and brought to class each week for use in discussion and for the instructor to collect. Students also use Google Docs to develop and update a list of resources for doctoral students who are thinking about becoming writing administrators. In addition, they follow the postings on the WPA-L to develop a list of topics to report on for the class and write an end-of-semester reflection, which they are then encouraged to upload to the Epsilen Personal Portfolio online.

• Composition History: Blackboard is used to distribute handouts to students electronically as PDF files. Students also used digital/online libraries for access to both required and supplemental readings.

• Women’s Rhetorical Practices: students used computers in the lab to access electronic texts and images for in-class discussion. Students were also encouraged to make use of the technology available in the computer lab to lead class discussions and to make their
seminar paper presentations (intended to be similar to conference presentations) at the end of the semester.

- **Computer-Mediated Writing Theory and Practice**: students meet in a computer lab and use web-authoring software, audio and video software, presentation software and social networking/online communication applications to complete a number of assignments that are represented in an electronic portfolio at the end of the semester.

- **Rhetoric and Written Discourse**: blogs were used for weekly critiques of reading assignments and for students to analyze the critiques of their peers. Handouts were made available as PDFs on Blackboard.

- **History of Rhetoric**: Powerpoint was used to share material during some class sessions by discussion leaders (including the instructor) as well as used by students to created powerpoint presentations to share at the end of the semester. Students read a couple electronic texts for reading assignments.

Examining how technology is integrated in graduate seminars shows how faculty are providing models for how their graduate students might teach their own graduate seminars in the future. Based on the data collected, it is clear that the faculty members in the Rhetoric and Writing Program at BGSU are modeling technology use in a variety of ways. These strategies not only model how graduate students should teach in the future but also help to build student confidence when working with technology. As one student participant commented, “I feel like I came into the program relatively comfortable using technology in my research, teaching, and professional development, though I think because of the support and emphasis placed on technology in this program my comfort level has increased.” While the program has a number of strengths in modeling how to teach graduate seminars, there are still some limitations to the
approaches described in the data collected. The analyses that follow are not intended to negatively critique the strategies faculty members use to teach the graduate seminars in the Rhetoric and Writing Program at BGSU. Instead, they are meant to raise awareness about how some technology integration in practice can inadvertently send a message to students that it is the norm. For example, each class has discussion leader assignments but not all classes require the use of technology to discuss the assigned readings. Having this assignment shows graduate students that when they become faculty members they should include similar assignments and it gives them experience with leading graduate-level discussions as faculty. Students are able to learn how leading a graduate-level course differs from leading the undergraduate courses they’ve already experienced as instructors. The limitation of this strategy is that it implies that incorporating technology is supplemental or optional. Similarly, the absence of a technology requirement when assigning students to develop a teaching unit for the writing pedagogy seminar sends a message to students that they adopt a similar approach when teaching their own pedagogy seminars in the future.

At the same time, increasing the number of technologies used or the extent to which they’re used is not merely a solution for modeling technology integration effectively. Assigning blogs to prepare for in-class readings, candidacy exams, or to maintain research logs is an effective way to model how graduate students may use this technology as instructors of future graduate seminars. For some students, blogging during coursework has also led to use beyond the classroom. One student participant writes, “I've also been blogging my dissertation ideas ever since my prelims began, so I can get my ideas out in print and also have others read and contribute suggestions. I've had several breakthroughs while blogging in this way.” Students with similar blogging experiences are likely to see the benefits of this type of technology
integration when mentoring their students in the future. However, not all students will independently choose to incorporate blogging beyond the activities used in the classroom. In these cases, the strategies mentioned above can model that blog use in the graduate seminar should be isolated to a specific classroom environment or a specific assignment rather than used across one’s coursework and development as a scholar.

Electronic portfolios in a graduate seminar face similar limitations when they’re only used in one or two seminars. The Writing Program Administration (WPA) course and the Computer-Mediated Writing Theory and Practice (CMWTP) course are the only two that directly mention the use of an electronic portfolio in their syllabi. In the Rhetoric and Writing Program, students are expected to revise their portfolios for use once they enter the job market during their fourth year. One student commented about feeling motivated to enhance her technoliteracy skills by writing, “The fact that most of the doctoral students have web portfolios that were developed in class helps because we are also encouraged to keep them updated.” This demonstrates one of the strengths this program has with respect to integrating technology beyond the classroom and motivating students to think about how it plays a role in shaping one’s identity as a teacher and researcher. While both courses use electronic portfolios with the intent to communicate one’s growth and development as a new member of the field, the WPA seminar refers to the Epsilen portfolio system, which is a pre-designed electronic space to upload documents. In contrast, the CMWTP seminar refers to an individually designed space through the use of web-authoring software. Without the use of a consistent portfolio system and a great deal of motivation from all graduate seminars, this approach can also inadvertently model to students that electronic portfolios pertain primarily to only a couple courses because they are not explicitly mentioned in
the syllabi for the other seminars in the program. As a result, it could still limit the extent to which students see their electronic portfolios as representations of their professional identities.

For most graduate students, each seminar serves as an overview of an area of specialization within the field of Rhetoric and Composition Studies. Therefore, technology integration in graduate coursework can influence students’ perceptions of how various sub-fields might use technology. In seminars that focus on historical inquiry (e.g. History of Rhetoric, Composition History, Women’s Historical Practices, etc.), using the internet to access historical artifacts and texts for in-class discussion shows students the benefits of conducting historical research online and extending one’s access to resources. While an effective use of technology in these seminars, it implies that historical inquiry only benefits from using technology as a tool to access artifacts. If the course introduced students to a range of possibilities for technology integration throughout historical inquiry, then they would have the opportunity to decide how it would influence their careers if they chose that specialty. This could include assigning students to communicate their research through traditional, linear means (e.g. word processed seminar paper) as well as non-traditional and non-linear means (e.g. audio and video integrated text) to see how it influences the analysis of their research.

In other seminars, reading about technology integration in a specialty and interacting with technology in a specialty through a hands-on approach can make impressions on students depending on the areas in which they choose to focus their research. In the Writing Assessment seminar, the syllabus shows one week devoted to computerized writing assessment through the use of course readings. In the Writing Program Administration seminar syllabus, students are asked to read the conversations on the WPA listserv for in-class discussion and to create an online document of resources for others interested in becoming writing program administrators.
Given the challenge of teaching students about an entire specialty within the discipline in one semester, these activities demonstrate that this graduate program values time spent on technology integration in courses aside from the CMWTP seminar.

Though representative of one of this program’s strengths, these activities also have their limitations. For example, the Writing Assessment course covers discussions on several topics such as teacher response to student writing, grading student writing, writing assessment as heuristic, writing assessment as pedagogy, writing portfolios, etc. Still, not all topics include an emphasis on how technology plays a role in understanding the issues those topics raise. In the absence of discussing technology’s role within these topics, reading about the topic of computerized writing assessment could imply to students that this is one of only a few ways to integrate technology in this specialty. Also, reading conversations on the WPA listserv and creating an online document of writing administration resources could imply to students that technology usually serves as a vehicle to communicate about and store information within this specialty. Granted, these seminars may use technology in additional ways not mentioned in the syllabi to shape students’ understandings of these specialties. Without asking students about their perceptions of technology use in these specialties, I cannot know exactly how technology use during coursework shapes those perceptions. The data do suggest that meaningful technology integration creates challenges for faculty members to find ways to cover the subject matter of a specialty while at the same time encouraging students to explore how technology can influence further inquiry and practice within that specialty.

This challenge is, in part, addressed in the CMWTP seminar. Interacting with a number of technologies through theoretical and hands-on approaches within a seminar focused on specializing in Computers and Writing models that this specialty is devoted to technology
integration. Being exposed to various web authoring, video and audio editing, communication, and presentation software can be both enlightening and overwhelming to students learning about this specialty. After thinking about how this seminar influenced her understanding of technology use beyond the classroom, one student commented on publishing in electronic journals. She writes, “Prior to this class there would have been no way I would have tried to be published in a journal of this nature because I didn’t have the skills to try. Knowing how to create a digital text, and who to ask for help, opens up the doors to move in that direction.” This experience shows how integrating technology throughout a seminar such as this one strengthens this program’s dedication to theoretical and practical digital work as a learning outcome. Unfortunately, extensive technology integration can have its limitations when it inadvertently implies to students that one must be highly knowledgeable of all these technologies to be a confident scholar in this area of expertise. If this seminar serves as the primary location for technology integration, it can also reinforce the misconception that the computers and writing scholar should be the sole technology specialist in the field of Rhetoric and Composition Studies or in one’s department. As Cheryl Ball (2007) explains, it didn’t take too long for her to become the “new media” person in her department as a new, non-tenured faculty member. Fortunately, her ability to choose which offers to accept and which offers to decline when asked by her colleagues to provide assistance allowed her to manage the perceptions that she is the main technology specialist in her department (Ball and Arola, 2007). Not all new faculty who specialize in this area will have similar experiences or be prepared to set boundaries with their new colleagues, though. Like other seminars within this program, faculty and graduate students should be critically aware of how technology integration influences their perceptions about the nature of each specialty within the field.
In every seminar, students learn how to develop their skills as researchers and the use of technology in those seminars has an influence over how students will continue to develop those skills after completing their coursework. The Research Methods seminar encourages students to use RefWorks and requires them to use blogs as research logs throughout the semester to organize texts gathered for research. These activities serve as useful introductions to how students may incorporate technology throughout their roles as researchers. For the purposes of creating seminar papers and developing potential conference proposals this type of technology use is helpful to students because it isn’t too time consuming takes and it’s free. Once students are comfortable with using blogs, they may choose to explore other types of technology to integrate throughout their research in the future. One student commented that, “I view technology as playing an important role in research and writing throughout the dissertation process. For example, having access to resources on the library web site as well as using programs such as Wiki or Google Docs to store or even share information can be beneficial.” While this example shows that students may chose to experiment with the use of these programs independently, not all students will do the same as they develop their research skills. In these cases, blogs can be useful as an introduction, but it can imply to students that these are the primary or only uses for integrating technology throughout one’s research. It can also imply that the process one takes for researching and writing a seminar paper is similar to researching and writing larger projects such as a dissertation, an academic journal article, or a full-length book. Without experimenting with integrating various technologies to assist with a research project or creating incentives for technology use, students may not be as prepared for the challenges of using technology in larger research projects and to communicate their findings in formats other than print documents.
In the Research Methods seminar, as well as other seminar courses, using PowerPoint software for student presentations is common. All of the syllabi from this data set indicate that students are required to make presentations of their seminar papers as they would give a presentation at a professional conference. These requirements demonstrate the program’s commitment to incorporating technology throughout this component of professional development. It also motivates students to learn presentation strategies from each other while considering how technology should be integrated in their own projects. One student noted that “watching fellow colleagues’ presentations—both in grad lectures on campus and at conferences—help to motivate me to try out new technologies.” These are important skills for students to learn as researchers, though this strategy has its limitations. Students may assume that using PowerPoint software is the only or preferred method for giving conference presentations or presenting their research to any audience. This creates challenges for students because not every conference has the hardware or software to accommodate for every presenter wanting to use PowerPoint software or other digital presentation software. In the seminar classroom, students could benefit from experimenting with various methods to present their research in public arenas. Then they can choose the most appropriate method for each audience to foster meaningful responses and dialogs about their work with their colleagues.

**Limitations**

From the syllabi, survey responses, and interview responses, it is difficult to create a complete picture of how technology use in graduate seminars models how students may use technology throughout their careers. First, not all courses included in this study are required for graduate students to complete their coursework. Also, syllabi do not show the full extent of how a seminar course functions during each class session. Some faculty members indicated that they
used technology in ways that are not indicated within the syllabi they submitted. Further, the
survey and interview questions only prompt participants to explain which courses they’ve taken
or taught and how they’ve used technology in those courses. This leaves the definition of what is
considered technology open to interpretation by participants. None of the participants was
directly asked to explain how their experiences in graduate seminars influence their perceptions
about how technology should be used in the future. Finally, this study does not include
participants who have graduated from the Rhetoric and Writing Program. Without including
these participants or following the participants currently within the program through a
longitudinal study, it is difficult to completely understand how technology use in graduate
seminars influences technology use in practice once students have started their careers.

In an effort to gather data that is more useful in addressing this research question, some
changes were made to the survey and interview questions for Phase II of this study. Instead of
asking survey participants an open-ended question to explain how they’ve used technology
during their coursework, I created a survey prompt that asks participants to choose from a list of
technologies to show which ones are integrated throughout their coursework. This gives
participants an idea of how the study defines technology use and limits the variation in
interpretation among participants. Participants can choose any combination of the following:
course management software (e.g. Blackboard), reference database software (e.g. Refworks),
podcasts (audio and/or video), blogs or wikis, social networking sites (e.g. Facebook/MySpace),
video sharing sites (e.g. YouTube), email, IRC software (e.g. Instant Messenger), web-authoring
software (e.g. Dreamweaver), and other (participants can elaborate on this choice). This method
produces quantitative data that shows trends in the types of technology being used in graduate
seminars. Knowing which types of technology are being used reveals how students and faculty are more likely to use some types over others.

To understand more specifically how technology is used in the graduate seminar and to understand how it’s modeled to students, I changed the interview questions to foster more specific responses. Instead of asking participants to elaborate more on their survey responses as I did in Phase I, I asked participants to recall specific experiences with technology use in Phase II of the study. The interview questions one and five in Phase II give participants the following prompts:

• Describe a situation where you used technology in a graduate course (as a teacher or as a student) to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?

• How have the experiences you’ve mention above (and/or other experiences not mentioned here) influenced your understanding of how technology should be integrated throughout the graduate student professionalization process?

These interview questions and the modified survey questions are more likely to foster more detailed responses that can be used to better understand how technology use is being modeled in graduate seminars.

How Are Programs Encouraging or Facilitating Professional Development That Emphasizes the Use of Technology and Inquiry into the Uses of Technology for Both Graduate Students and Faculty Members?

Summary of Trends

For students, teaching, presenting at conferences with peers or watching peers present at conferences, reading the department blog and Facebook page, and the camaraderie that comes
with discussing technology use are strong motivators for developing their technoliteracies. Though the computers and writing course discusses electronic publishing, students feel that *Computers and Composition Online*’s presence at BGSU encourages electronic publishing to a greater extent. Except for one, students did not typically mention their faculty advisors as motivators influencing their use of technology.

From the perspective of faculty, *Computers and Composition Online*, discussions through monthly professional development meetings between faculty and students, and other initiatives encourage technology integration in the professionalization process. In addition to these group-based activities, electronic publishing is also encouraged on a student-by-student basis depending on the student’s research interests. For some faculty members, a reciprocal mentoring relationship has been a motivating factor in developing their technoliteracies in the classroom. Experiences with other faculty members, such as seeing them work with technology inside and outside the classroom, have motivated them to think more about their technoliteracy development but those experiences haven’t necessarily prompted faculty to adopt those same strategies in their own work. Though they enjoy the support offered by institution-wide technology workshops, they often face the challenge of trying to find the time to learn new skills and to apply them to their teaching and research efforts.

*Analysis*

As the summary of trends indicates, the process of emphasizing the use of technology while encouraging professional development comes in many different forms. When asked in the survey to rate the level of agreement with the statement below, all faculty and student participants either agreed or strongly agreed that “My program and/or institution creates opportunities for faculty and graduate students to develop and sustain their technology skills
outside the classroom.” This response is overwhelmingly positive, though it does not reveal the various ways in which this process functions. Accessibility, program/institutional structures, and the actions of fellow faculty and students all show how this program encourages professional development while emphasizing technology use.

Even if it doesn’t promote an ideal use of what is accessible, having access to computer labs and technology for teaching and research on campus can encourage students and faculty to integrate technology throughout the professional development process. For example, the accessibility of computer labs for teaching first year writing can encourage graduate students to integrate technology in their pedagogy but it can also be discouraging as one student participant explains. In response to an interview question asking participants to explain how they negotiate accessibility to technology with ideal teaching strategies, she writes “because the [computer lab] is set up in a very old-school way (rows) it's hard to get everyone away from the computers and to get them to come together for discussion. I guess in thinking about all of this the technology, even when it's available isn't necessarily ideal.” Other students and faculty commented on having to be willing to modify their classroom activities at the last minute if the technology failed to function properly within the time constraints of a single class period.

Aside from whether or not the technology available is ideal, its presence can motivate students and faculty to use it in the classroom. As one faculty participant states,

I try to make use of the technology present in the classrooms. For example, the rooms I teach in now all have permanent (or in one case portable) instructor stations that allow us to use the internet, dvds, powerpoint and such in class. If we have the tech available, I want to use it if/when it is relevant to our work in class.
These experiences from students and faculty within this program show how accessibility to technology is a component that encourages technologically integrated professional development but alone it falls short of making a lasting impression. It has its limitations and in the case of teaching in computer labs, accessibility is only encouraging if a small number of students/faculty use the technology available. Some student participants mentioned needing to reserve computer labs earlier in the semester for class sessions. If not, or if more instructors were interested in teaching within these labs, the resources would become unavailable quickly. The challenge for graduate programs then is to find ways to encourage technologically integrated professional development while remaining aware of how that strategy needs to accommodate for the accessibility of resources on their campuses.

In addition to the accessibility of technology, forms of program-based or institutional-based structures can encourage the use of technology in professional development. These types of structured encouragement can take the form of organized meetings, workshops, cohorts, etc. led by members within the doctoral program, department, or across the institution. At BGSU, graduate students can take advantage of the services available at the STC or the CTL and faculty can use the resources at the CTL. Though advantageous to have these institutional-based structures, some faculty participants find that these structures offer encouragement that does not always lead to sustainable technology use. For example, one faculty participant commented, “The problem with outsourcing the work with technology is that these places [STC and CTL] are not always aware of the learning curve. Sometimes they teach the most sophisticated/high-end use of specific technologies. When [students] leave it’s hard for them to remember how to do it.” Not only are these institutional structures sometimes problematic for encouraging technology use
for student professional development, they also can create challenges for faculty seeking professional development. Another faculty member acknowledges that

  The closer to me such resources are, the more likely I am to be able to use them.

  Workshops at our Center for Teaching and Learning are rarely announced enough ahead of time that I can get them on my calendar; or worse they are scheduled over breaks, when I really do need to take vacation time. In general, many things are available, but they are of limited accessibility for a faculty member with many responsibilities and a busy calendar.

In both cases, relying too much on institutional structures for encouragement can make it difficult for students and faculty to achieve their professional goals of integrating technology more effectively.

  Lastly, the actions of faculty and students alike provide a means for encouraging professional development that emphasizes the use of technology. Participants were asked about the extent to which students were encouraged to publish electronically and how it compared to publishing in print. Overall, 47% of participants strongly agreed or agreed that students are encouraged and prepared to publish scholarship electronically while the remaining 53% of participants were either neutral or disagreed. One student’s response shows how the graduate program at BGSU actually changed her perceptions about publishing scholarship. She writes,

    I have always thought that publishing in print was valued more than electronic spaces, but at BGSU I have a few professors that have changed my thoughts about that. I think that they encourage us (or at least me) to publish both in print and electronically. I believe that they value both. Not only do the professors encourage it, but many have my peers have as well.
While many students felt encouraged by faculty to publish electronically, not all feel prepared to pursue the task. One student mentioned, “I would think we are encouraged but not really prepared. I guess we are supposed to do it on our own.” Another student writes, “There are several online journals we can submit to for publication, but I don’t know that I would know how to submit for one if the formatting needs to be a certain way or utilizes a different software package than ones I know.” Learning how to publish in general is a challenge for students who have been accustomed to writing seminar papers and who are still practicing the disciplinary discourse needed to communicate with larger audiences (Lauer, 1997). It is made even more challenging if they are also in the process of developing the skills for publishing electronically. This is perhaps one reason why it’s more likely for students to be encouraged to publish electronically and less likely for them to be prepared to publish electronically.

Further, not all areas of research utilize online journals often making it difficult for all faculty and students to benefit from being encouraged and/or prepared to publish electronically. One faculty member commented,

I tend to discuss publishing one on one, as a student works with a project, presents it at one or more national conferences, and looks to bring it to a wider audience. In my research areas, there aren’t many online venues, so I discuss print journals with my advisees. I assume that others who mentor doctoral students in our program do likewise, and that availability of online forums varies across different research areas in our discipline.

This is one of the reasons why it makes it difficult to integrate technology in this aspect of the professional development process. While difficult, it does not mean that it should not play a role in helping faculty and students prepare for changes in the field that may warrant a more
immediate need for electronic publishing in more areas of research within Rhetoric and Composition Studies. The topic of electronic publishing could serve as a point for discussion and reflection about how faculty and students will need to prepare themselves for changes in the types of texts they will be expected to create throughout their careers in a variety of researched areas within the field.

As I mention in response to the research question about faculty modeling how to teach graduate seminars, programs are encouraging professional development that emphasizes technology. However, it’s not just the actions of faculty that provide this encouragement but it’s also students who encourage each other through teaching first year writing courses. In response to an interview question about what motivates participants most to integrate technology, many students mentioned teaching and observing how others teach with technology. One student explains “I think that my teaching is one of the strongest motivators for my desire to further develop my technoliteracies. Being able to find new ways to incorporate technologies in the classroom helps me want to learn more.” Another student characterizes how sharing ideas lessens her fears about developing her technoliteracies. She writes,

As I talk with others that are using the tools in fun ways in their classrooms and studies, I want to try and do the same. There is an excitement that is generated by talking about the issues and possibilities. That excitement encourages more to be done because it displaces any fear that was there before. Rather than being afraid and avoiding the use of different tools, technologies, and literacies, with the openness comes a desire to try.

While these are just two representative cases for how discussing and observing how other graduate students teach with technology can be motivating for other graduate students, not all students naturally have these types of experiences. In order for teaching to be a stronger
motivating factor in developing techno-literacies, there needs to be a community or organized group of graduate student teachers and faculty who are already invested in using technology in their classrooms and dedicated to sharing that interest with others within the program. For example, regularly scheduled meetings, shadowing classes, and having follow-up discussions about what worked and didn’t work in the classroom would need to be considered as important components used throughout the graduate program. Without a more structured method for this type of encouragement, it’s less likely that students and faculty who don’t already use technology in their classrooms will be motivated to develop their techno-literacies in this particular way.

**Limitations**

The data collected show that the Rhetoric and Writing Doctoral Program at BGSU is using a number of strategies to encourage professional development that emphasizes the use of technology and inquiry into that use of technology for students and faculty. Though it shows a promising view of this graduate program’s commitment to technology integrated professional development, it does not show a complete view of the experiences all students have with this type of encouragement. For example, this data set does not represent first-year doctoral students, which makes it difficult to judge how they feel encouraged to integrate technology in their professional development. Further, with the exception of one four-year doctoral student, all student participants were in either the second or third year of the program. Without a sample that represents students at all stages in the program, one cannot know how this type of encouragement changes depending on where a student is in the process of completing the program.
Finally, the survey and interview questions connected to this research question fostered responses that were too similar to each other. In this case, the interview questions became redundant for participants who had already provided comments after answering each survey question. In an effort to obtain more detailed responses about how programs encourage professional development that emphasizes the use of technology, I modified the survey and interview questions for Phase II of the study. In Phase I, participants were asked to respond on a Likert scale to rate the extent to which the graduate program or institution creates opportunities for faculty and graduate students to develop and sustain their technology skills outside the classroom. In Phase II, participants were asked to choose from a number of options to show how their program or institution offers opportunities to develop and sustain their technology skills outside the classroom. The options included:

- program-specific pedagogy workshops that emphasize technology use;
- institution-wide pedagogy workshops that emphasize technology use;
- program-specific research workshops that emphasize technology use;
- institution-wide research workshops that emphasize technology use;
- program-specific publishing workshops that emphasize technology use;
- institution-wide publishing workshops that emphasize technology use; and
- other.

Though this modified survey question only gives participants the option to describe how structured technology use functions for professional development, the modified interview question gives participants another option to comment on examples not limited to the choices above.
Instead of asking participants to refer back to their survey responses to answer the interview questions, I modified the interview to gather more specific, anecdotal examples of how participants used technology in the professional development process. Interview question number two prompts participants to

Describe a situation where you used technology (as a student or as a faculty advisor) to achieve a specific professional development goal(s) (e.g. for a conference presentation, a publication, committee work, administrative work, etc.). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?

Though not directly asking about how they were encouraged to use the technology, the question leaves the option open for participants to show how their personal experiences provide a form of encouragement to continue using technology. Also, interview question number four more directly asks about motivating factors by asking “What types of activities and support from your colleagues, your program, and/or your institution motivate you to further develop your technoliteracies as a teacher, researcher, and/or administrator in the field? Why?” Understanding why certain types of support are more motivating than others can help programs better understand the extent to which they should put effort into encouraging this type of professional development.

What Role(s) Do Electronic Dissertations Play in Teaching Graduate Students to be Techno-Literate? How Does the Creation of These Texts Teach Students How to Create Other Electronic Texts?

**Summary of Trends**

In general, students explain how topic choice, methods for data collection, the writing process, email with committee members and peers, and the Graduate College’s ETD requirement
influence the extent to which technology is integrated in the dissertation process. Some students mention using wikis, blogs, and Google Docs for the researching, brainstorming, and writing portions of the dissertation process. As for the challenges students face with integrating technology in the dissertation, time constraints were mentioned the most. Though some students explained feeling pressure to complete their dissertations in traditional formats over electronic formats, time constraints are more likely to keep students straying too far from traditional dissertation formats.

Faculty responses show that students are being encouraged to choose technology-based research topics and to integrate some use of technology in the manuscript. Like students, faculty members believe that the extent to which technology is integrated throughout the dissertation process is dependent on the research topic. Some faculty members offered a number of suggestions for what they see as an ideal integration of technology throughout the dissertation process. Helping students define a dissertation project relatively early in their coursework could inspire students to integrated technology more effectively. This includes using a more longitudinal approach that starts with choosing a topic in the research methods course and then developing that topic through other graduate courses in preparation for the dissertation itself. Having regular discussions with students about how technology can support the research, writing and representation of the project can also assist in better technology integration.

Analysis

This research question is a challenge to answer because, except for one, all student participants were in the middle of the graduate program when the data was collected. Some had already developed a topic and constructed a prospectus for their dissertations and others were still in the process of completing their coursework. Though this presents a challenge for
generating a response to this research question, the perceptions that participants had about technology integrated throughout the dissertation process are valuable to understanding how graduate programs should consider the connections between dissertation work and technoliteracy skills.

To address the first part of this research question, the extent to which electronic dissertations help graduate students at BGSU develop their technoliteracy skills is varied among the processes used and the products that result from those processes. Overall, when asked to respond to this statement in the survey, “Technology is incorporated throughout the dissertation process,” student and faculty participant responses were varied. On a Likert scale from (1) to (6), 35.7% of participants strongly agreed giving a rating of (1), 35.7% gave a rating of (2), 14.3% gave a rating of (3), and 14.3% gave a rating of (4). In this data set, students commented more on using technology during the process of developing ideas and gathering research for the dissertation and less on how it could be used for the final product. It is entirely likely that student participants explained the use of technology during the early stages of dissertation work because that is what most of them were in the process of doing when they answered the survey and interview questions and not an indicator that this is the only place technology use occurs. It is also possible that student participants were already comfortable with using blogs, GoogleDocs, and research databases due to using them for seminar papers or for other tasks during the graduate program, thus making the use of these technologies an extension of their current digital literacy skills rather than teaching them new skills. Given these responses, electronic dissertations in the Rhetoric and Writing Program at BGSU are less likely to play a role in teaching students how to develop new digital literacy skills and more likely to play a role in teaching students how to modify the skills they already have to complete the dissertation.
In making these claims, I am considering the multiple constraints that students and faculty face when integrating technology throughout the dissertation process even though BGSU requires graduate students to submit final versions of the dissertation as an electronic document in PDF format to the Graduate College. One student described her disappointment with the formatting requirements imposed by the Graduate College. She writes,

I think that because dissertations must be submitted electronically it is a shame that links, videos, sound clips, etc. cannot be included in the electronic documents. I think that for some dissertation topics this could be really important. Even in regards to my own project I see links to sample electronic portfolios being something that might be useful to future readers of the electronic document.

While limiting for students who already have a strong interest in using technology throughout the presentation of their dissertations as final products, the Graduate College requirements could be even more discouraging for students still developing their digital literacy skills. This type of institutional constraint prevents electronic dissertations from serving extensively as an activity within the graduate program that teaches students to further develop their technoliteracy skills.

Before creating an electronic dissertation that fulfills the requirements of the graduate college, students need to work with a dissertation chair and other committee members who may have varying opinions on the role technology should play in the presentation of dissertation work. Faculty members also face challenges with helping students in this process since they provide advice based on their own experiences with technology use, their specialties of research within the field, and the requirements set forth by the program, the department, and the university. One faculty participant commented on the “ideal” use of technology in dissertation work by saying, “I guess I would define this in terms of each dissertation and its student and
committee members since high levels of technology are not called for with every project or equally attractive to all the human beings involved in dissertation work.” For example, committee members may have varying preferences about the format when reading each chapter based on previous experiences serving on other dissertation committees. Reading a dissertation chapter in an unfamiliar format can make it difficult for committee members to assess and provide useful feedback for students especially if the document is multimodal. The expectations of committee members represent a challenge that has been described by The Dissertation Consortium (2001) as well. For example, consortium members Devan and Darrell explain that “[a]lthough the dissertation supposedly involves ‘new’ knowledge, the audience expects to read it in ‘old’ (conventional) ways…Satisfying a committee’s formal expectations by working within traditional forms might well be the easier portion of a candidate’s task” (The Dissertation Consortium, 2001, p. 442). These are just some of the limitations associated with relying on electronic dissertations at BGSU to greatly enhance students’ technoliteracy skills.

Ideally, using electronic dissertations to help students integrate technology effectively while improving their digital literacy development takes a considerable amount of time and effort. One faculty member describes an ideal use of technology in the dissertation process as the student and her advisor (an advisor who herself is well-informed on emerging digital writing and research theories and practices) work in close consultation to identify from the very beginning of the pre-dissertation planning process, how the project will be drafted and presented to final audiences. Technology is not viewed as an add-on but as an assumed component of the project. The discussion then becomes (and remains) in part an exploration of the various ways technology can support the research, writing, and representation of the project.
This strategy provides several opportunities for electronic dissertations to help students develop their technoliteracy skills, but it is dependent on a number of conditions that are difficult to put into practice. Graduate programs with only one or two faculty members who are “well-informed on emerging digital writing and research theories and practices” will find it difficult to advise students creating electronic dissertations while helping them continue to develop their digital literacy skills. Students whose dissertations focus on topics that emphasize computers and writing research will most likely work with the one or two faculty advisors in the department with the skills mentioned above. Students who chose topics in other areas within the field of Rhetoric and Composition Studies are then more likely to work with advisors who have skills in those same areas. This makes it more likely for electronic dissertations to serve as activities for students to continue developing their digital literacy skills when students choose topics in the area of computers and writing. For students who choose topics in other areas of the field, it is less likely for electronic dissertations to serve in a similar way. That in mind, graduate programs interested in helping students develop their technoliteracy skills through the use electronic dissertations should consider how all faculty need support as advisors and how students need support from other members within the program in addition to their advisors.

Given the various challenges explained above and the data collected from this sample, the second part of this research question is difficult to answer in Phase I of this study. To understand how the creation of electronic dissertations teaches students to create other electronic texts I would have needed to survey and interview participants who had already completed their dissertations. As I mention earlier in my analysis, this is one of the limitations to Phase I of this study since all but one of the student participants were in the middle stages of the graduate program. Further, the skills needed for incorporating technology throughout a dissertation are
similar to yet very different from the skills needed to do so for the creation of other electronic
documents like online journal articles. For example, dissertation writing is geared toward an
audience of select committee members and subject to the formatting guidelines designed by the
graduate program and the institution. Conversely, an online journal article is designed to appeal
to the editorial board and the journal’s readers while adhering to the journal’s formatting
guidelines. Though the subject matter may be similar between what one writes in a dissertation
and a journal article, the differences in context and purpose between these documents could
make it difficult for students to transfer the digital literacy skills learned during the dissertation
to the creation of an electronic text like an online journal article. This part of the research
question also assumes that there is a necessity for students to create electronic texts after they
complete their dissertations within their area of specialty. Because each specialty within the field
has varying uses and expectations for electronic texts, it lessens the chances for electronic
dissertations to automatically teach students how to create such texts in their future careers
unless there is a specific purpose for doing so.

Limitations

As I explain in the analysis section above, there are a number of limitations to
understanding the data collected in Phase I of this study. Most of the graduate student
participants were in their second or third years of the graduate program and the survey and
interview questions were not designed to gather specific data about the entire dissertation
process. These questions also did not align well with the second portion of this research question
pertaining to how electronic dissertations teach students to create other electronic texts. In an
effort to understand how technology is being used more specifically in the dissertation and to
learn how those uses can teach graduate students to further develop their digital literacy skills, I
modified the survey and interview questions in Phase II of this study. Rather than asking participants to use a Likert scale to respond to a statement about incorporating technology throughout the dissertation process, I asked participants show how it’s incorporated by choosing from the multiple options listed below.

- Technology is incorporated throughout the dissertation process in the following ways.
  Check all that apply.
  - Correspondence among doctoral candidates and committee members.
  - Distributing and providing feedback on chapter drafts.
  - Gathering and organizing source material.
  - Collecting and analyzing data.
  - Drafting the dissertation (through the use of text, image, audio, etc.)
  - Defending the dissertation.
  - Depositing the dissertation (e.g. electronic thesis and dissertation).
  - Other

In the interview, I also modified question four to collect more anecdotal information instead of asking participants to explain an ideal use of technology throughout the dissertation process. In Phase II I gave participants the following prompt, “Describe a situation where you used technology (as a student or as a faculty advisor) in the candidacy exam or dissertation process to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?” Understanding how technology use influences the ability to achieve a specific goal can show how the dissertation plays different roles in teaching graduate students how to develop their digital literacy skills. Because these changes do not lead to collecting data that shows how creating an electronic dissertation leads to creating other electronic texts and
because my methods for finding participants did not lead to participants at the end of their graduate programs, I have chosen to leave the second part of this research question open to discussion in the final chapter of this dissertation.

Addressing Research Questions in Phase II

In Phase I, the survey and interview questions did not provide an opportunity to gather information in response to this research question: How are programs providing opportunities for advanced graduate students to advise new graduate students from a technological perspective? To learn more about this area of inquiry, I modified the survey distributed in Phase II of the study. Participants are asked to respond to the following prompt, which provides a more detailed look at how mentoring takes place in various graduate programs.

- Advanced graduate students are given opportunities to advise new graduate students on technology use in the following areas. Check all that apply.
  - Teaching
  - Completing coursework
  - Preparing conference presentations
  - Preparing publications
  - Taking candidacy exams
  - Dissertation work
  - Preparing for the job market
  - Other

The Phase I data also did not provide an opportunity to explore a response to this research question: How is technology integrated during the candidacy exam process? In Phase II, both
survey and interview questions were modified in the following ways. Participants were given this prompt in the survey:

- Technology is integrated throughout the candidacy exam process in the following ways. Check all that apply.
  - Notifying graduate students of how the exam process works
  - Studying for exams
  - Taking exams
  - Assessing exams
  - Other

Participants were also prompted in the interview to, “Describe a situation where you used technology (as a student or as a faculty advisor) in the candidacy exam or dissertation process to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?” These modifications provided an opportunity to learn more about the entire professionalization process and how technology is integrated at various points.

Reflecting on the Technology Integration Strategies at BGSU

The data collected from students and faculty within the Rhetoric and Writing Program show a strong level of commitment to meaningful technology integration throughout the professional development process. This is shown in all aspects of this program including coursework, extracurricular activities (e.g. Third Friday and Post-Prelim Group meetings), dissertation research, and job market preparation. Its emphasis on providing much-needed support and mentoring throughout the program motivates students and faculty members to experiment with technology beyond their comfort levels to further develop their technoliteracy skills. That in mind, the data show that the program still has room to improve its current
strategies for technology integration. Students and faculty members could benefit from regularly reflecting on how the current uses and non-uses of technology influence student and faculty perceptions of the role technology should play in the professional development process. These perceptions can have a strong affect on what motivates students and faculty members to continue to develop their technoliteracy skills in the future. Specific suggestions for how to improve a sense of awareness about technology integration throughout one’s graduate program will be addressed in chapter five.

In the following chapter, I analyze the results from Phase II of the study based on data gathered from three additional Rhetoric and Composition doctoral programs from across the country. The analysis from all programs in the study shows the similarities and differences among approaches toward integrating technology throughout the graduate student professionalization process. Though not representative of all doctoral programs within the field, these case studies reveal many of the complexities of this process. It further represents the need for improving student and faculty awareness in order to strengthen a program’s ability to integrate technology in meaningful and effective ways. Finally, the data from both phases of this study demonstrate the necessity for further research to improve this area of graduate education.
CHAPTER IV. RHETORIC AND COMPOSITION DOCTORAL PROGRAMS FROM ACROSS THE COUNTRY

To better understand how the professionalization process functions in graduate education throughout the discipline, I chose to survey and interview participants from doctoral programs across the country. In this chapter, I explore the data collected from participants in doctoral programs at the University of Louisville, Texas Tech University, and the University of Massachusetts – Amherst. As explained in chapter two, these programs were chosen randomly with attention to geographical location in hopes of representing a range of doctoral programs with varying approaches to graduate education. Examining the data from these programs allowed me to identify possible trends in technology integration that are worth considering as the discipline continues to research programs in the future.

This chapter begins with a description of the three programs in this study in order to contextualize the data gathered. As explained earlier in chapters two and three, providing these descriptions as a feminist researcher allows me to acknowledge how participant and researcher subjectivities influence the data analysis. After describing each of the programs, I address my original research questions by using the data collected from Phase II. Under each research question, I provide a summary of the findings, a more detailed analysis, and an acknowledgement of the data limitations. Finally, I conclude this chapter by reflecting on the trends discovered through the data and offering a few suggestions for how doctoral programs should reflect upon their technology integration efforts.

Description of the Rhetoric and Composition Program at the University of Louisville

The Rhetoric and Composition Program at the University of Louisville, which is located in Kentucky, was created in 1978. According to the Rhetoric Review’s 2007 Survey, there are
eight core faculty members and 40 students within the program (Brown, et al., 2008). Graduate students are offered teaching assistantships with an annual teaching load of four courses and an opportunity to teach first-year composition, intermediate/advanced composition, technical/business writing, or literature as subjects. A variety of professional development opportunities are available including writing center work, committee work, assessment, conference planning, editorial, and research assistantships (Brown, et al., 2008). Professional development workshops and ongoing orientation and training sessions are incorporated throughout the program, though the 2007 survey does not include the specific details of these workshops and sessions. The information gathered from Brown et al. (2008) demonstrates a strong commitment to professional development support for graduate students within this program. Providing an overview of this program allows me to contextualize the data I have collected, though the data from the University of Louisville are limited to two student participants. As I will describe in more detail later in this chapter, the small data set does not provide an exhaustive account of the program but still gives insight into how technology is integrated throughout the doctoral program at the University of Louisville.

At the time of the data collection, one participant had been enrolled in the program for less than a year and the other participant had been in the program for only two years. Like some of the participants from other universities, these participants indicated in the comment field that they skipped some of the survey and interview questions due to being new to the program or not having direct experience with the candidacy exam or dissertation process. Also, the absence of faculty participants from the University of Louisville contributes to the limitations of this data because their perspectives are equally important to understanding the culture of professional development within a graduate program. Unfortunately, there was not a strong response to my
request for participants when I contacted the graduate program at the University of Louisville. Though these limitations do create challenges for understanding technology integration throughout the graduate program at Louisville, the data collected are still useful to understanding how technology integration can vary from program to program.

Description of the Rhetoric and Composition Program at Texas Tech University

The Rhetoric and Technical/Professional Communication Program at Texas Tech University was created in 1991 and is located in Lubbock, Texas. According to the Rhetoric Review’s 2007 Survey, there are eight core faculty members and 68 students within the program (Brown, et al., 2008). Graduate students are offered teaching assistantships with an annual teaching load of four courses and opportunities to teach first-year composition, intermediate/advanced composition, or technical/business writing. Students are offered various types of professional development opportunities while in the graduate program at Texas Tech. These options include working in the writing center, industry internships, committee work, and assessment. Other types of support available include ongoing orientation and training sessions as well as professional development workshops (Brown, et al., 2008). The information gathered from Brown et al. (2008) demonstrates a strong commitment to professional development support for graduate students within this program, yet it shows little as to how the program integrates technology throughout its efforts. Using the data collected from this program, I explain later in this chapter how Texas Tech’s technology integration is situated in relation to other programs within the study.

The data are useful to understanding professional development at Texas Tech, yet there are limitations to how it can be analyzed based on the number of participants enrolled in the study from this program. Six participants responded to my request to study Texas Tech’s
graduate program (five were students and one was a faculty member). Among the student participants, three had been enrolled in the program for less than a year, one had been enrolled for two years, and one labeled himself as a master’s student with three years of experience in the program. Though not directly asked about their location in the survey, three student participants indicated that they were online students—one of which had recently relocated to the on-campus program at the time the data were collected. Texas Tech offers its masters and doctoral programs in Technical Communication and Rhetoric both online and onsite. Because only a small number of participants responded and more than half were online students, it was difficult to create a detailed analysis representative of the full nature of technology integration throughout professional development within this program. At the same time, the data are valuable to understanding how this program’s onsite and online opportunities contribute to its efforts at integrating technology throughout the professional development process.

Description of the Rhetoric and Composition Program at University of Massachusetts - Amherst

The Rhetoric and Composition Program at the University of Massachusetts – Amherst was created in 1972. According to the Rhetoric Review’s 2007 Survey, there are five core faculty members and 22 students within the program (Brown, et al., 2008). Students are offered teaching assistantships with an annual teaching load of two courses and opportunities to teach first-year composition and literature. Other professional development opportunities include work in the writing center, on committees, assessment, and assisting the Western Massachusetts Writing Project. Professional development workshops as well as ongoing orientation and training sessions are also available to support students throughout the program (Brown, et al., 2008). Like the programs at the University of Louisville, Texas Tech University, and Bowling Green State University, the University of Massachusetts – Amherst values the importance of offering its
students a variety of professional development opportunities as a means to prepare them to be members within the field.

However, the data from the participants in this study has its limitations like the data collected from the other programs in the study. Six participants responded to my request to study the University of Massachusetts – Amherst’s program (four were students and two were faculty). Though each student participant was in a different year within the doctoral program (years one through three) and a second-year masters student was included, the data from these participants do not represent the views of the entire program. At the same time, student participants were less likely to opt out of answering certain survey and interview questions due to their unfamiliarity with the program’s later requirements. These responses were helpful in filling in the gaps where participants from other programs skipped a number of survey and interview questions. When analyzed with the data from the other programs, the data from Phase II demonstrates various approaches to technology integration and their strengths and limitations.

Limitations of Interview Data and Course Materials

Though all of the participants in Phase II agreed to respond to the survey portion of the study, only a small number agreed to a follow-up interview. Each program has interview data to represent the views of at least one participant but only six out of 14 participants completed this portion of the study. Also, only one faculty member is represented in the interview data, which limited my ability to analyze the relationships among faculty and student responses within Phase II. Equally limiting is the absence of graduate course materials for this phase of the study. The small number of faculty participants as well as their choices to opt out of this portion of the study made it more difficult to gather a variety of textual artifacts from each program. Though these limitations created challenges for triangulating the data in Phase II in great detail, the interview
data still reveal details that were not apparent in the survey data. The anecdotal information recorded in the interviews demonstrates how participants’ experiences with technology are shaping their professional development process. Such information is useful to understanding areas where graduate programs might consider modifying their strategies for professional development support. While there are limitations to using the data in Phase II to make generalizations about graduate education in general, as I describe in the sections below, the data still show where graduate programs may choose to take a closer look at their current efforts in order to integrate technology more effectively throughout the professionalization process.

How Do Rhetoric and Composition Doctoral Programs Emphasize Technology in the Professionalization of their Graduate Students?

Summary of Trends

In the survey, participants were asked to assess how well graduate students are prepared to integrate technology throughout their roles as teachers, researchers, and administrators. Using a Likert scale, participants could indicate the extent to which they agreed or disagreed with a statement about preparedness for technology integration throughout these roles.

Table 2. Assessing Graduate Student Preparedness to Integrate Technology in Various Roles

<table>
<thead>
<tr>
<th>Roles</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree (1)</td>
</tr>
<tr>
<td>Teachers</td>
<td>30.8</td>
</tr>
<tr>
<td>Researchers</td>
<td>38.5</td>
</tr>
<tr>
<td>Administrators</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Overall, participants were most likely to agree or strongly agree that graduate students were prepared to integrate technology as teachers. As for their views on graduate students being prepared as researchers, participant responses were more varied. Lastly, the responses to the
statement about graduate students being prepared to integrate technology throughout their administrative roles were the most varied of all three options.

Trends in responses varied slightly among the different programs, though it’s difficult to compare the program at the University of Louisville because only one participant from that program chose to respond to this question on the survey—the other participant declined due to being new to the program and still having a certain level of unfamiliarity with the professional development process. The participants from Texas Tech University often responded with ratings of one or two to the statements on the survey. In contrast, participants from the University of Massachusetts – Amherst often responded with more varied ratings anywhere from two to six to these same statements. These differences, though not entirely indicative of these programs’ professional development efforts, are worth examining to better understand the type of support graduate students need to integrate technology throughout their roles as teachers, researchers, and administrators in the future.

Analysis

Though this data is mostly based on participants’ general impressions of their programs rather than direct examples showing how graduate programs professionalize their students with technology, the trends are worth considering for programs looking for areas to enhance their current professional development efforts. As I explained above, there are a number of variations among participant responses based on how programs prepare their students to use technology in their roles as teachers, researchers and administrators. Because the three programs included in Phase II offer organized teacher preparation courses and workshops to their graduate students, it is more likely for participants to see how each program strongly supports technology integration in their roles as teachers. One University of Louisville student gave the following response when
assessing how he feels supported by his program to further develop his technoliteracy skills. He wrote,

At my school we have a center devoted to helping teachers in a variety of ways including learning how to incorporate digital media in our teaching. Right now I am taking some one-day sessions on podcasting. This summer, I am hoping that my department will fund a trip to Ohio States DMAC (Digital Media And Composition). I would say that the university and the department are both very supportive of my efforts, and those of my colleagues, to develop technoliteracies.

This response demonstrates how important organized systems of support are to this student as he explores new ways to integrate technology throughout his role as a teacher. It also suggests that programs consider how other graduate students may equally value these types of support.

Providing opportunities for on-campus and off-campus professional support, similar to the examples provided by this student participant, could improve a program’s efforts to integrate technology throughout the professionalization process.

Similar to this participant’s experiences at the University of Louisville, a student from Texas Tech University commented on his strong feelings of support from his program while integrating technology as a teacher. He wrote,

I want to always be learning so I can better use my time and energy, try new resources and processes, and possibly stay a step ahead of my students. I find that my program director encourages us to learn so our students relate to us and perhaps trust and respect us more. My school DOES encourage us to expand our knowledge, but then, our field demands that we know all the newest.
Both participant responses reveal the support they feel from their programs while learning to become knowledgeable teachers, yet this approach is described differently. The Texas Tech student refers to the support being motivated by the need to relate to or stay ahead of the skills new students continue to bring with them to the classroom. Also, he includes the pressure from the field to be competent in using the newest version of technology. Such pressures are difficult to resist as Digirhet.org (2006) describes when being digitally literate is equated with knowing how to master several different technologies. Knowing this can happen, even when a program’s efforts are not intended to reflect this belief about digital literacy skills, raises questions for how programs may need to enhance their current methods of support. Reexamining these methods can help students better integrate technology through their roles as teachers and members of the Rhetoric and Composition community. Programs may need to find ways to regularly assess how their graduate students are feeling prepared and/or pressured to use technology in their classrooms throughout the professionalization process.

One final comment about how these programs are preparing their graduate students to integrate technology as teachers comes from a student participant at Texas Tech University. She feels prepared to integrate technology throughout her role as a teacher as well as other roles because, as she comments, “being in a program that has both an onsite and an online doctoral degree in TCR [makes] the melding of technology and education run rather smoothly.” This comment shows how the organizational structure of a doctoral program like Texas Tech can positively influence students and faculty members to integrate technology throughout the professionalization process. Having an online degree program or a number of online courses available to graduate students demonstrates the importance of integrating technology through one’s role as a teacher. Still, programs with these opportunities can face challenges with
integrating technology throughout the professionalization process if these opportunities become so commonplace that students come to expect them once they leave the program. As Kristin L. Arola and Cheryl E. Ball (2007) have indicated in their article about the transition from graduate student to faculty member, this is a challenge that graduate students can easily face when they pursue careers at institutions that are very different from where they obtained their degrees. For graduate programs with online degree and course offerings, students will need more preparation for integrating technology throughout their roles as teachers, researchers, and administrators because they may not have the same types of access to those resources once they leave the program. Online degree and course offerings allow for students and faculty to improve their digital literacy skills but this approach alone is not substantial enough to assist graduate programs with integrating technology throughout the entire professionalization process.

When compared to feeling prepared to integrate technology as teachers, participant responses were more varied when reflecting on how prepared graduate students are to do the same in their roles as researchers. These responses could vary more due to the topics students choose to research. Not every student will share the same interest in researching issues pertaining to the Computers and Writing community, which means that programs face the challenge of providing more individualized support while integrating technology throughout this aspect of the professionalization process. One University of Massachusetts – Amherst faculty participant added additional comments after her survey response noting, “It depends on the graduate student and how much they have focused on technology. For those working in the area, my answer to "researchers' would be much different.” The other faculty member from the same university commented similarly on her answer depending on the interests of each graduate student. Both somewhat agreed (3) that graduate students were prepared to integrate technology throughout
their roles as researchers. Further, the variations in student participant responses could be explained by their limited experiences as researchers. Because very few participants had first-hand experience with the dissertation process, an influential part of their development as researchers, it might have been difficult for them to gauge how well students are prepared to integrate technology in the future. Technology integration throughout one’s work on seminar papers, dissertations, and publications can differ greatly which is why graduate programs may need to find new ways to assess how they are preparing their students to integrate technology as researchers.

These limitations aside, the data do show that these programs are providing support to graduate students as they learn to integrate technology as researchers. As one student participant from Texas Tech indicated in his comments, integrating technology as a researcher means finding ways to interact with colleagues in online spaces. He writes,

Most of my colleagues are very techno-savvy, and I want to be on par from them. These are not formal activities; instead, it is the informal conversation that takes place via facebook, twitter, blogs, etc. that I want to participate in. Without some savvy, I'd be left out and not be seen. At this point, the technology is more a matter of me building connections with my colleagues and managing information as I described above.

In this case the program provides support for its graduate students through creating a culture that values the use of technology for academic discussions. This type of support is useful because, as this participant indicates, it is motivating for students with varying technoliteracy skills. It also promotes the type of collegial discussions that students will be expected to participate in with members from across the discipline. Though beneficial, implementing this approach within a program that does not have a well-established community of students and faculty with shared
research interests is not without its challenges. Programs with faculty and students who have wide ranging research interests will need to analyze often the strengths and limitations of various technology integration strategies to find the best way to support their students’ development as researchers.

Of the three roles that were addressed in the survey, the responses about preparing graduate students for integrating technology as administrators were the most varied. This trend could be because graduate students do not typically get much exposure to administrative work prior to completing their graduate programs thus making it difficult to assess how technology plays a role in that preparation. When asked in the interview portion of the study to comment on the types of activities and support that motivate you to further develop your technoliteracies as a teacher, researcher, and/or administrator, only one of the participants referred to an administrative task. Though she aligned it more closely with her motivations as a teacher and researcher, this University of Massachusetts – Amherst student participant wrote,

Well, the approach to comp/rhet here at UMass is very much interested in thinking about technology, pedagogy and writing. I’ve been fortunate to be a part of a group of grad students that are chosen each year by the Writing Program to be Technology Fellows. This group (which changes each year) spends the entire year looking at the intersections of writing and technology in order to develop experimental pedagogy that can then be tried in our classrooms.

This professional development opportunity serves as an effective way to prepare graduate students for integrating technology throughout their roles as teachers, researchers, and administrators. It also serves as an example for how programs can resist the marginalization of
graduate students by attempting what Andrea Lunsford (2007) suggests in her discussion of treating students as “colleagues rather than acolytes” (p. 69).

Still, the opportunity mentioned by the University of Massachusetts – Amherst student participant is not always available to students in other graduate programs. There are opportunities in many graduate programs for students to participate in committee work as indicated by Brown, et al. (2008), but there is no indication that technology is integrated throughout that work based on the information provided in that study. This is an area of the professionalization process that requires more attention from graduate programs because students will inevitably have to serve in administrative roles in the future. Integrating technology while preparing graduate students for serving in those roles will introduce them to some of the challenges they may face when working administratively with future colleagues who will not always share the same values.

How Are Faculty Members Using Technology in Graduate Seminars as Models for How their Students Might Use Technology in their Careers?

Summary of Trends

In the survey, participants were asked to choose the types of technology they have used within the graduate courses they have taken or taught. According to the participant responses, the top three technologies used in graduate courses were course management software, email, and blogs/wikis (see Table 2). Other technologies that were used less frequently in graduate courses included: podcasts, video sharing sites, web-authoring software, social networking sites, IRC software, and reference database software. When asked in the interview to describe a situation where they used technology in a graduate course (as a teacher or as a student) to achieve a specific goal(s), participants recalled their experiences with course management software, blogs,
and presentation software. The participant responses from Texas Tech University and the University of Massachusetts – Amherst show that graduate seminars use a range of different technologies whereas the responses from the University of Louisville show a smaller range with the use of course management software, email, blogs/wikis, and video sharing sites. These variations among the programs may be due to having fewer advanced graduate student participants from the University of Louisville and a broader range of graduate student participants with more coursework experience from the other programs within the study.

Table 3. Technology Use in Graduate Seminars

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course management software</td>
<td>100</td>
</tr>
<tr>
<td>Email</td>
<td>92.9</td>
</tr>
<tr>
<td>Blogs/wikis</td>
<td>71.4</td>
</tr>
<tr>
<td>Podcasts</td>
<td>50</td>
</tr>
<tr>
<td>Video sharing sites</td>
<td>50</td>
</tr>
<tr>
<td>Web-authoring software</td>
<td>50</td>
</tr>
<tr>
<td>Social networking sites</td>
<td>28.6</td>
</tr>
<tr>
<td>IRC software</td>
<td>28.6</td>
</tr>
<tr>
<td>Reference database software</td>
<td>21.4</td>
</tr>
</tbody>
</table>

Analysis

The range of technologies being used in graduate seminars within these programs models to students the value of technology integration in this aspect of the professionalization process. Students are able to see how using technology in their graduate seminars motivates them to continue using it beyond the classroom as they further develop their professional skills as members of the academic community. One Texas Tech student participant commented on this effect while referring to his use of blogs in a graduate seminar. He wrote,

As a student, I was asked to keep a blog for one of my classes. The blog was to ‘house’ all the deliverables for the course. For me, that seemed like a simple task, a task too
simple for a whole blog, so I created a website where I housed the class deliverables, wrote blogs for readings from other classes, and makes notes, comments about my journey as a doctoral student and the fluctuation of interesting topics for flooded my mind. This is only my first semester in the program, but I have already gotten much use out of the blog that could have easily disappeared after one semester.

In this case, modeling blog use in the classroom to store course materials prompted this student to revise that use of blogging and recording one’s efforts during coursework. Without this experience in the classroom, this student might not have developed the best method for referencing his coursework during future professional activities until later in the professionalization process.

Another student participant from Texas Tech also recalled a similar approach to blog use as a means to archive files and notes collected during her coursework. She sees the necessity in compiling electronic files for all of the documents she uses during coursework so that she can refer to them as needed. She writes, “I use my blog and my email to store copies of my class notes and annotated articles/chapters just in case I lose my computer. An additional benefit is that I believe making these files available to my peers, sharing via email or posting online, is a form of collaboration and building of community.” Both approaches to blogging are representative of the trends Jen Almjeld (2006) describes in her article about graduate students and new professionals using blogs as “storehouses” to organize their research and coursework as well as spaces to reflect on and create new ideas. Further, this student’s comments about the benefit of sharing knowledge with her colleagues to build a stronger community show that modeling one use in the classroom can lead to helping students see blogging as an extension of their professional identities.
Though the use of blogging in the classroom was one of the most highly mentioned technologies, course management software was used the most by participants. One University of Massachusetts – Amherst faculty participant described how she usually uses the technology. She writes,

Probably my most frequent use of technology in graduate seminars would be discussion forums through a course management system (at UMass our system is called SPARK, a customized version of WebCT/Blackboard). I find this use of technology to be much better than the typical response papers we all did in print years ago as it is both less formal (and provides for more engaging or open-ended responses than students used to write in print) and allows for consistent feedback from the entire class rather than just me.

For graduate students, this strategy helps them develop a strong sense of the published literature in the field. As one University of Massachusetts student participant explained,

I've attended courses where the instructor was using online course management software (cms) (Blackboard). In two different courses the instructor used the cms to post readings and assignments, and we had weekly discussion threads where we were required to post twice to each discussion. While I understand many of the issues surrounding cms, I found it to be quite useful in terms of organizing the course and extending the discussion beyond the walls of the classroom.

In programs that model the use of course management software in similar ways, graduate students also learn the benefits of adopting this approach once they go on to teach their own students in the future. This can therefore contribute to their professional development as teachers and create opportunities for graduate students to continue to explore how technology can be integrated throughout that process.
These represent positive examples for how modeling technology in the classroom can be used to help students see its value beyond the classroom, yet not all students will take the same approach that these participants did during their coursework. Further, these strategies could imply to students that these are the only or primary methods for integrating technology in the classroom, thus limiting the chances for improving technology integration in the future. This is why students and faculty invested in meaningful technology integration should consider enhancing the current approaches to modeling technology use in graduate seminars. Making room for small amounts of time to be spent reflecting on the modeling that happens in the classroom can create even more opportunities for graduate students to improve their technology use beyond the classroom.

However, as one faculty participant from the University of Massachusetts – Amherst indicated in her interview response about technology integration in graduate education, “you can lead a horse to water but you can’t make him/her drink.” Based on her experiences, she writes

Part of what I learned as a program director is that it is difficult (and probably counterproductive) to force TAs to incorporate technology into their courses. As a result, our approach is to offer opportunities, support, and training but the specific route this might then take in the classroom needs to be in the hands of individual teachers. It seems to work the same way in terms of graduate training in rhet/comp. While almost all our students experience technology in some way in their seminars or courses they teach, how far each individual students wants to go with it is ultimately an individual choice. Though this is only the perspective of one faculty member from one graduate program, it is possible that other graduate programs will face similar challenges as they consider the best means for integrating technology throughout the professionalization process. Knowing this
challenge exists makes it even more essential for faculty and graduate students to share the responsibility of technology integration especially as it pertains to modeling its use in the graduate classroom.

How Are Programs Encouraging or Facilitating Professional Development That Emphasizes the Use of Technology and Inquiry into the Uses of Technology for Both Graduate Students and Faculty Members?

Summary of Trends

To understand how graduate students and faculty are given opportunities to develop and sustain their technology skills outside the classroom, participants were asked to choose the types of technology integrated workshops available within their programs and their universities. In general, the responses from the survey indicate that the programs in this study are more likely to have program-specific or institution-wide pedagogy workshops emphasizing technology integration and less likely to have workshops that address other aspects of the professionalization process.

Table 4. Technology Use in Professional Development Activities

<table>
<thead>
<tr>
<th>Professional Development Activities</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program-specific pedagogy workshops</td>
<td>66.7</td>
</tr>
<tr>
<td>Institution-wide pedagogy workshops</td>
<td>66.7</td>
</tr>
<tr>
<td>Program-specific research workshops</td>
<td>33.3</td>
</tr>
<tr>
<td>Institution-wide research workshops</td>
<td>25</td>
</tr>
<tr>
<td>Program-specific publication workshops</td>
<td>8.3</td>
</tr>
<tr>
<td>Institution-wide, publication workshops</td>
<td>0</td>
</tr>
</tbody>
</table>

Analysis

Though the similarities among the three programs studied in Phase II are useful to understanding where technology integration functions well and where it should be enhanced, the variations provide additional insight into how graduate programs support their students and
faculty. One of the student participants from the University of Louisville clarified his response that there were institution-wide pedagogy workshops available to students and faculty. He writes, “I would say that my university (its center for teaching and learning) offers institution-wide technology workshop that are academically/pedagogically relevant. In a sense, that is ‘technology workshops that emphasize pedagogical use of the technology.’” In this case, technology training is at the forefront of the workshops at this institution as a means for acquiring the skills to use specific software. These types of workshops are useful for students and faculty looking to further develop their ability to use technology as a tool. At the same time, if this is only one of a few opportunities to develop student and faculty technoliteracy skills then it can be more challenging to find ways to use technology beyond the contexts in which students and faculty first learned how to use it.

In an effort to provide more opportunities for meaningful technology integration, the examples referred to by the University of Massachusetts – Amherst participants, demonstrate how program-specific pedagogy and research workshops support graduate student and faculty professional development. One faculty participant from this program mentioned “there are pedagogical workshops offered through the university's Office of Information Technologies but the Writing Program also has a Technology Fellows program focused on research and teaching as well as specific technology workshops. Technology also plays a role in our 1-credit practica for teachers.” This response shows one way in which programs can provide the support students and faculty need by offering multiple points of entry to develop one’s technoliteracy skills based on one’s professional/personal preferences. The Technology Fellows program, as one student participant described, offers an opportunity for more advanced technology integration for graduate students sharing similar interests. This student wrote,
This group (which changes each year) spends the entire year looking at the intersections of writing and technology in order to develop experimental pedagogy that can then be tried in our classrooms. The time spent as a tech fellow is supported by a small stipend. The ‘why’ has to do with personal/professional development of each tech fellow as well as to create and share new writing pedagogy in The Writing Program.

In this case, students learn how to integrate technology pedagogically while also using it to guide inquiry into its role within the program. This fellowship program also gives students the opportunity to consider how technology and inquiry into the use of technology can influence administrative work throughout the program. All of the skills students develop through this type of professional development will assist them in building the confidence and knowledge needed to enter the roles they will play once they complete their graduate program.

Professional development groups such as the Technology Fellows are not without their limitations, however. When only a select number of students and/or faculty are given the task of developing technology integrated pedagogies it can further position those individuals as technology specialists and primarily responsible for accomplishing these types of tasks. The remaining students and members of the program may then be less likely to share the responsibility of finding meaningful ways to integrate technology throughout their professional lives. This is why programs should consider a variety of methods that provide engaging opportunities for all students and faculty members to share the responsibility of technology integration.

Another challenge programs can face when encouraging or facilitating professional development that emphasizes the use of technology comes from finding a means to include distance education students. For example, some Texas Tech University student participants were
enrolled in the online doctoral program and indicated a lack of knowledge or experience with these types of activities. One student wrote, “I am a distance student and so have not had many opportunities to evaluate what my university offers on site” when asked to choose which types of workshops were available for professional development. Another student commented similarly by writing “I am an online student. My institution offers many programs in a face-to-face format but not in an online format that I can participate in.” In these cases, students have to seek out other opportunities for technology integrated professional development. Granted, finding ways to build one’s skills beyond one’s program or university is something graduate students will need to do once they enter the workforce. However, professional development that usually only occurs onsite limits the support that distance education students and students who commute over greater distances need. Not all doctoral programs have as many distance education students as Texas Tech University, but several have students who need to commute thus adding to their time constraints and influence the likelihood of participating in these professional development activities. As Inman and Corrigan (2001) point to in their article, the demand for more professionals with doctorates in the field could increase due to the number of currently employed writing instructors interested in pursuing degrees. These students are more likely to enroll in programs part time and would need more opportunities to pursue their degrees online. These are just some of the reasons why programs should consider how to find a balance between supporting onsite and offsite graduate students through the use of technology integrated professional development.
How Are Programs Providing Opportunities for Advanced Graduate Students to Advise New Graduate Students from a Technological Perspective?

**Summary of Trends**

In the survey, participants were asked to comment on the ways in which advanced graduate students are given opportunities to advise new graduate students on technology integration. The data in the table below represents the overall trends in participant responses.

**Table 5. Technology Use in Graduate Student-to-Student Mentoring Opportunities**

<table>
<thead>
<tr>
<th>Mentoring Opportunities</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>77.8</td>
</tr>
<tr>
<td>Completing coursework</td>
<td>44.4</td>
</tr>
<tr>
<td>Preparing conference presentations</td>
<td>33.3</td>
</tr>
<tr>
<td>Preparing publications</td>
<td>11.1</td>
</tr>
<tr>
<td>Taking candidacy exams</td>
<td>22.2</td>
</tr>
<tr>
<td>Dissertation work</td>
<td>22.2</td>
</tr>
<tr>
<td>Preparing for the job market</td>
<td>33.3</td>
</tr>
</tbody>
</table>

At the University of Louisville, one student participant indicated that teaching was the only opportunity for graduate students to mentor other graduate students on technology integration. Another student participant from the same program chose to write the following comment instead of choosing the options listed on the survey. He wrote, “Student mentors are assigned for new students but I don't think technology use is one of the things that is talk about in such mentoring groups.” At Texas Tech University, the student participant responses varied among “none of the above” or no response to completing coursework. Two student participants were unsure due to being primarily part of the distance education program. The one faculty participant from Texas Tech University chose not to respond to this question on the survey. Trends among the University of Massachusetts student and faculty responses indicate that this program provides a number of opportunities for graduate students to mentor each other through the use of
technology integration. The two faculty participant responses differed significantly from each other, however. One faculty participant response showed that the program offered every opportunity for student-to-student mentoring while the other faculty participant response showed only an opportunity for it to occur in support of students’ professional development as teachers.

Granted, the data only represent the views of a relatively small number of participants from each program. As I explain earlier in this chapter, several student participants were first- or second-year graduate students with little to no experience with the mentoring opportunities that could be available within their programs. Also, some of the participants from Texas Tech University were distance education students and possibly unaware of potential on-site mentoring experiences. Finally, participants may not have recognized the mentoring among graduate students as relevant to the survey question if the mentoring usually happens informally or less guided by the programs themselves.

**Analysis**

The responses from these participants show that these programs are invested in providing opportunities for graduate students to mentor each other while developing technologically integrated pedagogy skills. Valuing this type of professional development not only strengthens the collegiality among students but it also allows students and faculty to share the responsibility of preparing graduate students for their careers. With the large task of staying knowledgeable with advancements in technology and how it influences pedagogy, programs that have these mentoring opportunities could find the task more manageable.

Though these programs are making considerable efforts to foster mentoring relationships among graduate students developing their pedagogical skills, the participant responses show that there might be limitations to mentoring in other areas of professional development. With
undergraduate students bringing their digital literacy skills to the classroom, it can be easier to see the benefits and motivation behind graduate students mentoring each other to advance their pedagogical skills. Providing mentoring opportunities that emphasize technology through coursework, preparing conference presentations, preparing publications, taking candidacy exams, dissertation work, and preparing for the job market may initially appear to have fewer incentives and therefore receive less attention from programs. For example, if a graduate student learns from her mentor how to use wikis to teach her students how to develop their organizational skills then she can put that into practice during the next class section and see the results relatively immediately, thus motivating her to continue that relationship with her mentor. If a graduate student is learning from her mentor how to organize her research through the use of blogs to prepare for a conference presentation, a seminar paper, a publication, a candidacy exam, or a dissertation, then it can take longer to see the results given that these activities are lengthier than class sessions.

Given these challenges, programs would still benefit from encouraging more directed mentoring relationships among graduate students to assist with the entire professionalization process. As one Texas Tech University student participant commented,

I think that the best way technology should be integrated is by professors and other graduate students demonstrating how they use technology themselves in their own research and professional development. Similarly, providing more official sites or links to faculty and student online presences—doing this as an overt project with intention rather than by accident—could benefit me most directly.

The need for emphasis on creating more direct or guided mentoring opportunities is evident in this student’s response as he mentions connecting to faculty and students online. Though time
constraints and motivational factors will always influence the extent to which this type of mentoring can take place, finding the means to provide professional guidance through student-to-student mentoring will allow for more technologically integrated graduate education.

How is Technology Integrated During the Candidacy Exam Process?

*Summary of Trends*

When participants were asked to comment on how technology is integrated throughout the candidacy exam process, the responses were varied. In addition to the data represented in the following table, a few participants included comments after their responses to clarify how they were interpreting the survey question. Of all the survey and interview questions, the responses from the participants seemed to indicate that this question was the most ambiguous.

*Table 6. Technology Use in the Candidacy Exam Process*

<table>
<thead>
<tr>
<th>Candidacy Exam Stages</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notifying students about the exam process</td>
<td>72.7</td>
</tr>
<tr>
<td>Studying for exams</td>
<td>27.3</td>
</tr>
<tr>
<td>Taking exams</td>
<td>54.5</td>
</tr>
<tr>
<td>Assessing exams</td>
<td>18.2</td>
</tr>
</tbody>
</table>

One faculty member from Texas Tech University wrote, “Well, the exam questions are emailed to students and the students email answers back--is that what you mean?” Both University of Massachusetts – Amherst faculty participants both indicated the use of email and word processing as the only examples of technology use during the candidacy exam process after indicating that they were not entirely sure what the question was asking. Finally, one of the student participants from the University of Massachusetts – Amherst wrote, “well, ‘traditional’ digital technologies are used in this process--word processing, email.”
Analysis

It’s difficult to make large assumptions to answer this research question because the wording of the survey question seemed to be ambiguous to several participants thus influencing their responses. It was made intentionally this way to limit the influence of my subjective view toward technology use and candidacy exams but it seems that participants needed more details to answer the question. It is also difficult to make judgments about how these programs integrate technology throughout this process because many of the student participants had not prepared for or taken their exams prior to taking the survey. Though these are limitations to my analysis of the data, the anecdotes provided by a few students and one faculty member during their interviews suggest that there are topics to consider when integrating technology throughout the candidacy exam process.

Only 27.3% of participants mentioned the use of technology while studying for exams, but fortunately three student participants explained in detail how they used technology to study or how they intended to use it. In each case, students used software to organize reading material and annotations in preparation for the exam and in some cases in preparation for writing the dissertation. One Texas Tech University student wrote, “I have not completed my candidacy exam or started the dissertation process. I am working with EndNote Web to begin my reading list. The program is simple and all of my bibliography information is together--very easy--but I also have to search the library for sources, which can be a challenge.” As this student response indicates, using this type of technology to study for his exam will allow him to recall and access texts efficiently which is a necessary skill for performing well on one’s candidacy exam. Not all students from this program, however, use the same software to study as the following response suggests. Another Texas Tech University student wrote,
I am only in coursework, so I do not know how to answer the question. Based on the advice of several colleagues, I will start using NVivo next term to track all of my readings, take notes and memos, so that I will be familiar with the software. I intend to use NVivo to track my readings for qualifying exams, identify major themes, and to organize my readings more effectively.

Based on the data, it seems that this program does not have a standard method for integrating technology throughout the preparation portion of the exam process but it does encourage students to find a method that appeals to them. This strategy is helpful within graduate programs because students inevitably have varying preferences when it comes to studying for their exams. At the same time, it’s difficult to tell from these responses the extent to which the program encourages technology integrated study methods and how those methods may be useful beyond preparing for candidacy exams.

While thinking about her methods for studying with the use of technology, the following student from the University of Massachusetts – Amherst describes how it could benefit her beyond the exam. Her response was,

I am currently working on my area exams which will lead to the dissertation. I have been using a program in MS Office called One-note. One-note is like a digital version of the old trapper keepers--it let's you organize notes and drafts, and set up a tabbed structure that allows easy access to any notes you have taken on any particular reading. This works especially well in the drafting process because it allows you to move quite fluidly from draft to notes and back.

The method this student participant reveals the potential that technology has when integrated throughout the candidacy exam process. Because candidacy exams assess students’ knowledge
of the field and eventually they will need to articulate how their views relate to those within the field, it is helpful for them to choose a study method that can apply to projects beyond their exams. As the data show, there are several ways for students to do this but not all students will immediately turn toward technology to enhance their study methods without guidance from their programs. Here is where graduate programs could benefit from finding ways to more directly support graduate students as they choose the best technology-based study method for them. Without making those efforts more direct, the candidacy exam process can end up seeming peripheral to other aspects of a technologically integrated professionalization process.

Another factor influencing technology integration and the candidacy exam process is how exams are assessed. According to the data in this study, only 18.2% of participants indicated that technology is used to assess candidacy exams. Though most participants didn’t comment on how this assessment works, one faculty participant from the University of Massachusetts – Amherst did elaborate briefly on her assessment strategy while answering one of the interview questions. She wrote, “In candidacy exams, I’ve used technology mostly to share drafts with my comments on track changes.” This response shows that there is a place for technology use in the assessment of candidacy exams even though it may play a small role in that assessment process. Like the exam process at University of Massachusetts - Amherst, the design and delivery of the candidacy exam within other programs will influence the extent to which technology is integrated through the assessment process.

While the above strategy represents one way to better integrate technology throughout candidacy exams, doctoral programs will still need to explore additional methods if the intent is to integrate it more effectively throughout all aspects of the professionalization process. As described in an article written by Heidi Estrem and Brad E. Lucas (2003), the need to re-examine
the candidacy exam process is great if we intend on continuing to put the values held by many in
the field into practice. Estrem and Lucas (2003) suggest coupling traditional written exams with
a separate documentation that represents a student’s “historical perspective, use of technology
for scholarship and/or teaching, a research tool or method, interdisciplinarity in their studies, and
professional experience (teaching, internships, appropriate work experience)” (p. 410-11). A
similar strategy is currently implemented within the Rhetoric and Writing Program at Bowling
Green State University. Students are required to develop a portfolio of documents—some
students choose to create electronic documents—that are used to make a smoother transition to
the dissertation process and the job market. This is one example showing how programs can
integrate technology throughout the candidacy exam process but it’s not the only strategy that
programs should consider using. As I explain in chapter five, the programmatic culture and
institutional environment should be considered while searching for ways to integrate technology
more effectively. If the expectation is for future faculty to be well-rounded knowledgeable,
technologically confident professionals, then each aspect of the professionalization process
should reflect an effort to meet that expectation.

What Role(s) Do Electronic Dissertations Play in Teaching Graduate Students to be Techno-
Literate? How Does the Creation of These Texts Teach Students How to Create Other Electronic
Texts?

Summary of Trends

In the survey portion of this study, participants were asked to indicate how technology is
integrated throughout the dissertation process by choosing one or more of the options included in
the following table. When asked in the interview to describe how they used technology to
achieve a specific goal within the dissertation or candidacy exam process, participants usually
chose to describe the candidacy exam process or skipped the question entirely. Due to number of student participants positioned at early stages within their programs, it is not surprising that the data would have its limitations. This lack of data makes it difficult to offer examples for specific types of technology being used throughout the dissertation process. However, some participants did speculate about technology use in the dissertation based on what they had heard from colleagues or faculty within their programs.

*Table 7. Technology Use in the Dissertation Process*

<table>
<thead>
<tr>
<th>Dissertation Stages</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correspondence among doctoral candidates and committee members</td>
<td>81.8</td>
</tr>
<tr>
<td>Distributing and providing feedback on chapter drafts</td>
<td>81.8</td>
</tr>
<tr>
<td>Gathering and organizing source material</td>
<td>90.9</td>
</tr>
<tr>
<td>Collecting and analyzing data</td>
<td>90.9</td>
</tr>
<tr>
<td>Drafting the dissertation</td>
<td>81.8</td>
</tr>
<tr>
<td>Defending the dissertation</td>
<td>36.4</td>
</tr>
<tr>
<td>Depositing the dissertation</td>
<td>81.8</td>
</tr>
</tbody>
</table>

*Analysis*

Before delving into an analysis of this research question, I would like to briefly revisit Susan Lang’s (2002) and Jude Edminster and Joe Moxley’s (2002) articles about electronic dissertations. Edminster and Moxley (2002) describe ETDs as dissertations or master’s theses that are archived and circulated electronically rather than in print, which usually take the form of word processed documents or Adobe portable documents (PDF). According to Lang (2002), this approach to dissertations is more common in universities than it is for dissertations to exist in alternative formats with multimedia clips or the use of an interactive, web-based application to present the final product. In the case of this research question, I’m interested in both formats of
dissertations as well as how technology plays a role in the entire dissertation process and how it influences the rest of the professionalization process.

The survey responses suggest that many students and faculty use, or perceive the use of, technology throughout the dissertation process within these graduate programs. Because technology is integrated at this point in one’s graduate education, it continues to reinforce the value for such integration throughout the professionalization process. Though there were only a few participant responses that described the types of technology being used, they do show the benefits and limitations of incorporating it within one’s dissertation work. One faculty participant from the University of Massachusetts – Amherst described her experiences with using technology to advise students living far from campus. She wrote,

in these instances, everything from data sets to outlines and drafts is shared via e-mail (although in one instance we used a shared drive to exchange comments/draft) and “conversations” take place either through IM/Chat or occasionally on the phone. I’m not sure this experience either enhanced or inhibited; it more accurately replaced what would have typically been done face to face.

This example shows how these types of online communication can be beneficial to both students and faculty members during the drafting process. As this participant further acknowledges, “it makes such long-distance work even possible, giving us the opportunity to stay in close touch rather than isolating the dissertation writer as would have happened (and did) when I was in graduate school.” In the process of advising and drafting, the role of technology within the dissertation process more easily seen as a good fit just as it does with gathering source material and collecting/analyzing data. In contrast, the limitations of using technology in the dissertation
process are more likely to arise when developing the final format to be accepted by one’s committee and one’s graduate college.

Incorporating technology within the final format of the dissertation stem from a variety of limitations as Lang (2002) describes. In her article, Lang (2002) acknowledges that dissertation committees with expertise in their content areas and little expertise in working with non-traditional formats will face challenges when evaluating students’ work. She also describes the conflicts that committees face between preparing students for careers ever-changing academic environments and for the current academic culture of print-driven publication. Further, the expectations of graduate colleges that emphasize standardized dissertation formats impose their own limitations on how students can integrate technology throughout the dissertation.

Given these challenges it is understandable that graduate programs may focus more attention on technology integration throughout other aspects of the professionalization process and less attention on how it functions during the dissertation process. One University of Massachusetts – Amherst student commented on this issue by writing,

I think overall, the approach taken here at UMass is at the stage where pedagogy and curriculum is a priority. We haven't reached a stage where we are consistently thinking deeply about graduate students' experience with technology beyond the classroom--for example, talk of passing a blog-dissertation or the development of an academic website would be quite radical.

These issues then influence the extent to which electronic dissertations can play a role in teaching graduate students to be techno-literate. Because students already face the challenge of learning to write in the dissertation print genre, using this aspect of the professional development process to develop new techno-literacy skills could make it even more difficult. If programs
intend on encouraging non-traditional dissertation formats, they will need to consider how they offer opportunities throughout the early stages of the degree for their students to develop their skills with non-traditional writing formats.

To address the second part of this research question, I have to first acknowledge that the data from the study provide very little insight into how electronic dissertations teach students to create other electronic texts. Because none of the student participants had first-hand experience with the dissertation process and the faculty participants did not include a discussion of this issue in their responses, the data has its limitations. Though not currently working on his dissertation, one student from Texas Tech University did provide some useful insights based on his experiences with electronic publishing. He wrote,

I also worked online with an editor in the UK to revise my document and submit the final version for an eBook. I used technology for every step. I saved paper, time, fuel (no travel), and money, but I also struggled with finding sources, with challenges with my computer, and with schedules for the editor (overseas) and the time difference when we worked online synchronously.

In this case, the student revised a seminar paper to make it function for an academic publication and there were both benefits and limitations to integrating technology throughout that process. Though seminar papers are very different from dissertations in how they can be revised for publication, both require large amounts of support and guidance that are even more important when technology is involved.

Programs considering how to support technologically integrated dissertation work might consider how it could lead to developing students’ electronic publishing skills. This is especially important when programs are encouraging students to find ways to publish their dissertations
once they leave. In addition to the challenges I’ve described earlier in this section with electronic dissertations, preparing students to publish their work becomes more difficult when there are few options to publish electronically. Further, motivation may keep students from pursuing non-traditional dissertation formats if they are working in a content area where academic journals and books are primarily distributed in print. These are issues I continue to explore in the following chapter as I describe the implications of this study.

Reflecting on the Technology Integration Strategies within Phase II

Based on the data collected from Phase II, it is clear that the graduate programs at these universities are making efforts to integrate technology throughout all aspects of the professionalization process. Teacher training provides the most direct guidance on technology integration while graduate curriculum, research, candidacy exams, and dissertation work offer more indirect guidance to students developing their technoliteracy skills. Given the challenges programs face with trying to provide students with technology integrated support through all components of the professionalization process, it is not surprising that there are more examples of indirect guidance. Programs can provide the resources and opportunities, but as one faculty participant from the University of Massachusetts – Amherst commented, “while almost all our students experience technology in some way in their seminars or courses they teach, how far each individual students wants to go with it is ultimately an individual choice.” Improving student and faculty motivation may be one of the greatest challenges programs will face as they enhance their technology integrated professional development efforts.

Though motivation will continue to be a challenge, this does not mean that students and faculty do not already see the necessity for technology integration in graduate education. Of the participants included in this portion of the study, two responses seemed especially relevant to
this underlying need for enhancing graduate programs. One Texas Tech University student wrote,

Technology is something that should be integrated at the onset of graduate studies. We need to know not necessarily the software or programs but the technological tools that are present so that we can decide how we might incorporate them into our research, our teaching. In addition to integrating the technology, I think it's also important to discuss things like ethics and social action so that graduate students can begin to fashion their thoughts on how they will rhetorically use technology.

Another Texas Tech University student wrote,

We cannot expect to keep up with the fast pace of change and thus prepare our students if we do not know what's going on with technology and what they need to know in the workplace. As I've learned more and seen my students' responses to me as a prepared instructor, I've realized that, just as knowing what your teen is doing and being 'hip' by knowing the latest trends, we have to know what our students are doing and participate in their realm to relate to them and best prepare them for their futures. :-) Quite a challenge, but in the end, our students appreciate the investment we make, and we are better able to investigate and develop new theories and pedagogical methods because we know what's new and work to see what works!

Both students come from a programmatic culture that highly values the roles technology plays in graduate education so their impressions are not necessarily on point with all students or faculty within every program in the field. However, their comments are useful because they recognize that technology integration should function with rhetorical purpose within graduate programs.

In chapter five, I explore how the findings from this study can assist graduate programs in
their efforts to integrate technology with the sense of purpose I describe above. I also provide
suggestions for how programs may want to enhance their current strategies to create a more
technologically integrated professionalization process for their students. Each program has its
own department and institutional culture to consider when choosing the best methods for
technology integration, which is why the suggestions discussed in the final chapter should be
reflected upon and assessed before implementing them in the future.
CHAPTER V. SUPPORTING GRADUATE PROGRAMS’ EFFORTS AT MEANINGFUL TECHNOLOGY INTEGRATION

In the beginning of this dissertation, I explored several trends within the field pertaining to technology integration and graduate education. As both CCCC (2004) and NCTE (2008) position statements explain, student literacy needs continue to shift in a digital age, thus influencing the scope of writing instruction to more often include print and digital literacies. These trends, in combination with research that has already been conducted about technology integration in graduate education, reveal a need to explore the possibilities and challenges of technology integration throughout the entire professionalization process. As acknowledged in chapter one, such conversations led me to ask this overall research question: how do Rhetoric and Composition doctoral programs emphasize technology in the professionalization (i.e. the process of acclimating graduate students to their roles as scholars and literacy educators) of their graduate students? In previous chapters, I have shown how the data collected from four doctoral programs in the field provide some examples for how technology integration is functioning throughout the professionalization process. Though the data from these case studies is not representative of the work in all Rhetoric and Composition programs, the trends throughout the data have enabled me to develop benchmarks for programs to consider as they continue to improve their technology integration efforts.

Overall, programs should consider developing strategies that improve student and faculty awareness about technology integration throughout the professionalization process. This general approach includes two main components that should assist programs in developing this awareness:
• find a balance between providing structured and less-structured support to students and faculty to accommodate for varying levels of interest with technology integration and changing student/faculty populations; and

• incorporate more regularly scheduled program-level assessment that includes student and faculty perspectives on technology integration while valuing the roles students and faculty play in implementing changes as a result of that assessment.

In the remaining sections of this chapter, these components are discussed in more detail as I provide my reasoning for making them based on the data gathered from this study and research from other scholars within the field. Under each component, I include several concrete ideas for how programs might choose to put them into practice. As explained throughout this dissertation, it is difficult to provide practical applications for technology integration that will work appropriately in every program due to the differences among program and institutional culture and resources. That in mind, the examples provided in this chapter should be read with consideration for how they can and should be modified to best fit the needs of students and faculty in one’s graduate program. In the last section of this chapter, I briefly explore where more research is needed within the scope of understanding how technology integration can and should function throughout the graduate student professionalization process.

Improving Student and Faculty Awareness

I’ve chosen to explore this general approach first because the extent to which a program integrates technology throughout the professionalization process is influenced by how aware students and faculty are of its importance to graduate education. Programs will benefit from creating a sense of community where students and faculty feel invested in technology integration because it will inspire a shared responsibility for its use in the professionalization process.
Researchers such as Andrea Lunsford (2007) have acknowledged the importance of developing this type of community by working with graduate students as “colleagues rather than acolytes” (p. 69). Chris Anson and Susan Miller-Cochran (2009) have also shown the benefits in giving students more agency in their education through the use of wikis in the classroom. In the data from this study, participants acknowledged several ways in which their programs promoted awareness of the importance of technology integration as well. The dominant use of course management software and the availability of institutional technology resources by all programs in the study, opportunities as section editors for *Computers and Composition Online* (Bowling Green State University), online options for doctoral education (Texas Tech University), and options for piloting technology integrated first-year writing classrooms (University of Massachusetts – Amherst) are some examples for how programs promote an investment in technologically integrated professionalization. There are, however, limitations to these and other current methods for developing this type of community within Rhetoric and Composition doctoral programs.

Creating this sense of awareness and investment in technology integration throughout the professionalization process can be challenging to achieve given the nature of program and institutional cultures. Though programs have already developed this sense of awareness in some areas of the professionalization process, areas where technology integration is emphasized less can affect student and faculty impressions about its importance. For example, student participants from Bowling Green State University and Texas Tech University commented on being aware of technology’s importance due to observing the teaching, research, and administrative work done by other students and faculty. However, not every student and faculty member within those programs was engaged to the same extent in technology integration.
throughout the entire professionalization process. In the case of the University of Massachusetts – Amherst, student participants were more aware of technology’s importance in pedagogy but less aware of its relationship in theory and practice to other components of the professionalization process. According to some of the participants from the University of Massachusetts – Amherst, the program incorporated technology more overtly in areas of pedagogy and less directly in other professionalization activities. As noted in chapters three and four, these differences can be the result of several variables, including time constraints, how closely one’s research interests are associated with technology, and the availability of professional development opportunities that continue to improve one’s digital literacy skills.

Motivating students and faculty to participate in strategies that improve a community invested in technology integration throughout the professionalization process will have its challenges and require strategies for regular reflection and reflective assessment. In the next two sections, I examine how the components of this approach can help programs work with the challenges associated with improving technology integration. Considering the benefits and limitations of each component will give programs an opportunity to more closely examine how they may need to modify this approach with their students and faculty to best meet their needs.

Finding a Balance between Structured and Less-Structured Support

In chapters three and four, I addressed my research questions by examining how the programs in this study integrate technology throughout the professionalization process. Within this component of my overall recommendation, I will use the topic of each research question to describe the potential implications of balancing structured and less-structured support for technology integration in graduate programs. The analysis of each topic will include suggestions for how to create this balance in practice.
Modeling Technology Integration in Graduate Seminars

The data from the programs in this study show that structured support for technology integration is most easily available in graduate seminars. For example, every program includes the use of course management software with the use of discussion boards and some programs, like Bowling Green State University and Texas Tech University, use synchronous or asynchronous chat rooms depending on the location of the seminar (i.e. online or in-person settings). The use of this technology and others in the classroom, as described in chapter four, provide structured support for students developing their digital literacy skills and learning to develop a sense of graduate pedagogy. This current type of technology integrated support, however, can have its limitations due to the subject matter of the course and to the time faculty have available to balance traditional course material with new technologies. Here is where students and faculty can participate more equally by taking responsibility for improving the technology-integrated structured support currently used in graduate seminars. Using this strategy aligns with Haas, Tulley, and Blair’s (2002) emphasis on mentoring over mastering when using technology in the graduate classroom. In their experience, this pedagogical approach can aid in lessening the pressure for faculty may feel to be all knowing in order to integrate technology effectively. One way to provide this support is for faculty to encourage students to bring new technologies to the classroom or to find new ways to use the current technologies in the classroom. Bowling Green State University takes this approach in its Computers and Writing Theory seminar by requiring students to develop software demos in teams. These demos are then presented in class and followed by hands-on experimentation with how one can use various technologies in practice.
For graduate seminars focusing on other areas of research within the field, providing this type of support could be modified to better fit within the context and goals of these courses. Instead of using student-led software demos, students could be asked to incorporate the use of technology in preparation for or during their leading of in-class discussions about the assigned readings. Some faculty within programs, including Bowling Green State University and the University of Massachusetts – Amherst, already require students to post and read responses to course readings through the use of course management software or blogs but the technology type and method of use remains the same throughout the semester. Giving students and faculty the opportunity to explore how to modify and find new approaches to integrating technology for the purpose of preparing for and leading in-class reading discussions can provide even more of the structured support needed to enhance their digital literacy skills.

As programs find their own strategies for creating this support in their graduate seminars, they should continue to be aware that structured support should involve maintaining similar levels of consistency across every seminar course. In Phase II of the study, participants indicated that course management software, email, and blogs/wikis were the top three technologies primarily used in graduate seminars. Podcasts, video sharing sites, web-authoring software, social networking sites, IRC software, and reference database software were used less frequently. In Phase I, the seminars at Bowling Green State University showed similar trends with the exception of the Computer-Mediated Writing Theory and Practice course. Though there is some consistency among courses using three of the technologies listed, the remaining technologies are used with less consistency, which can influence how students and faculty value technology’s role in the professionalization process. Maintaining consistency in how graduate seminars provide structured support for digital literacy skill development does not necessarily mean that each
course should be required to use the same technologies in the same ways. Instead, faculty should begin by agreeing to integrate technology throughout at least one of their shared pedagogical goals to show students that it’s valued across several areas of research within the discipline. Like the example provided above, agreeing to incorporate the use of technology in preparation for or during the leading of in-class discussions in every seminar would improve awareness about the value of technology integration throughout the professionalization process.

**Emphasizing Technology in Student and Faculty Professional Development**

In Phases I and II of this study, professional development activities tend to emphasize technology in less structured or less-consistently structured ways due to the variety of student and faculty professional and research interests within each program. Because the Rhetoric and Composition field has several areas in which students and faculty can specialize, programs should consider how the needs of those specialties influence technology integration. At Bowling Green State University, there are structured, technology-integrated professional support options for those students interested in computers and writing as a specialty (e.g. editing positions for *Computers and Composition Online*). There are also professional support opportunities that have technology incorporated in a less-structured format such as the Third-Friday and Post-Prelim professional development groups to accommodate students with varying specialties at different points in the graduate program. In Phase II, participants indicated that technology is integrated more often in program-specific and institution-wide pedagogy workshops, though less often in program-specific and institution-wide research workshops. Though the professional needs of students specializing in areas aside from computers and writing are somewhat different (e.g. there are fewer opportunities to publish electronically in specialties other than computers and writing), it does not mean that programs should provide less-structured support for these
students. To improve the value of technology integration throughout one’s program, more structured support should be available throughout a variety of professional development activities and not limited to those with a pedagogical focus.

In professional development workshops designed for first or second-year students, like BGSU’s Third-Friday meetings, programs could include discussions and/or demos given by faculty or more advanced students that explore the benefits and limitations of technology integration within each meeting topic. For example, a meeting focused on conference attendance and presentations could include strategies for reading and participating in online forums and blogs both before and after attending the conference to enhance one’s knowledge of conversations within the field. In a meeting for the similar group of students, the focus could be technology-integrated methods for drawing connections among one’s seminar courses in advance preparation for candidacy exams and finding dissertation topics. This could include hands-on demonstrations of various reference software (e.g. RefWorks, Endnote, etc.) and discussions about the challenges and benefits to using technology for this purpose. At the heart of these examples should be an emphasis on reflection from both students and faculty as to how technology use influences one’s professional goals as a specialist in one or more areas of the field.

Within efforts to provide these types of structured support, there will continue to be challenges depending on the needs of students and faculty members. Some challenges include what Inman and Corrigan (2001) recognize as the potential increase in offsite students within doctoral programs. They explain that this could be in response to updated university guidelines that require currently employed instructors to obtain doctoral degrees. That in mind, programs may need to find a better balance between providing structured professional development
support to onsite students and to offsite students. At Texas Tech University, a few participants commented on being unaware of professional development support due to being enrolled in the online doctoral program. Others in the online program commented on being unable to participate in structured professional development activities because many were only available on-campus and the distance prevented them from participating. Though Rhetoric and Composition programs with only onsite degree offerings are less likely to have students enrolled at great distances, they are still likely to have students who are commuters and part-timers especially when there are online seminars available.

Because every program has varying numbers of onsite and offsite students, at first glance it could seem too time-consuming to develop and maintain technologically integrated professional support for a small number of offsite students in comparison to those onsite. As with integrating technology throughout all aspects of the professionalization process, each program’s needs should be considered before adopting a method for structured professional support for offsite students. This is why programs may find more success in modifying their current structured support strategies to include offsite students’ needs rather than create a completely separate strategy for a relatively small number of students. For example, Bowling Green State University’s doctoral program has used course management software to provide support between monthly professional development meetings—Third-Friday for first and second year students and the Post-Prelim group for students in their third and fourth years of the program. Making this information available to students online is useful for onsite and offsite students, especially for students who cannot attend the monthly meetings, though it could still be improved to enhance the structured support students need. Instead of utilizing separate forums for Third-Friday and Post-Prelim group meetings, the program could merge these forums and more actively integrate
their use beyond preparing for or documenting meeting notes. Perhaps participating in the program’s professional development forum could be included as a component of each seminar to help students draw connections between their coursework and other professional development opportunities. It could also be integrated throughout the prelim and dissertation processes for students to find connections between seemingly isolating work and the professional community of their doctoral program.

As with any suggestion for practical application, this example has its benefits and limitations for students and faculty. Enhancing an online professional development forum improves student and faculty awareness of the importance of technology integration in graduate education. Making it accessible to current students and prospective students projects the program’s investment in supporting their students’ professional development and could make it more appealing to prospective students. Not only is this helpful for offsite students, but it can also help onsite students feel more prepared for in-person workshops/meetings if materials are available online or if the online component is integrated with specific in-person workshop/meeting components. As for its limitations, maintaining an online forum could make onsite students less motivated to attend in-person workshops/meetings when they can find the majority of the information they need online. This can become especially true once students complete their preliminary exams and enter the dissertation phase, which doesn’t require much interaction beyond working with their committees. Further, a lack of participation in the forum from students and faculty due to time constraints could keep it from being as supportive as it needs to be for offsite students who cannot attend the workshops/meetings on campus. These benefits and limitations, as well as those mentioned earlier in this section, should be acknowledged and reflected upon by students and faculty within each program before adopting
an approach that enhances current approaches to technology integration. Though it may be time-consuming at first, finding strategies where students and faculty share the responsibility for technology integration in professional development will better prepare them for fluctuating digital demands in the field.

*Advanced Graduate Students Advising New Graduate Students*

Enhancing student and faculty awareness toward technology integration can happen within programs that emphasize the value of student-to-student mentoring. Because technology integration can be time consuming, it is important for programs to consider how this type of mentoring can make the time spent more efficient and effective. Given the outcomes of this study, there tends to be more structured support for technology integration when graduate students mentor each other through teacher preparation and less structured support in other professional development activities. For example, Bowling Green State University students who teach first-year writing are placed with advanced graduate students for mentoring during their first year of teaching. This type of structured support ends after the first year and technology integration is up to the discretion of the students. There is evidence of some less-structured mentoring throughout other professional development activities (e.g. Third Friday and Post-Prelim group) but newer students are not typically paired with advanced graduate students by the program to mentor within these areas. Among the universities represented in Phase II, the majority of participants indicated student-to-student, technologically integrated mentoring available through teaching whereas considerably fewer participates mentioned its use in completing coursework, preparing conference presentations and publications, taking candidacy exams, dissertation work, and preparing for the job market. With these trends in mind, it’s possible that other doctoral programs in the field may find themselves in similar situations with
their graduate student mentoring efforts. They may also benefit from examining how these efforts can function more effectively as they enhance technology integration throughout the professionalization process.

As programs examine their mentoring strategies, they may find it easier to improve technology integration during student-to-student mentoring for teacher preparation due to the seemingly more immediate need for its use in the first-year writing classroom. Motivating students to participate in this type of mentoring within other areas of the professionalization process will be challenging in practice but possible if programs keep some of the following suggestions in mind. First, find ways to incorporate mentoring activities with other familiar professional development activities. Some examples might include observing and reflecting upon conference presentations given by student mentors, working together with mentors to lead sections of professional development workshops/meetings, and pairing recent alumni with third and fourth year students who share interests in similar areas of the field. Second, programs should include the use of technology to facilitate student-to-student mentoring as well as encourage student mentoring groups to reflect upon the various roles technology should play in certain professional development activities. For example, student-to-student mentoring can take place through the use of email, wikis, blogs, etc. but students should still remain reflective about how the use of these technologies should fluctuate depending on the professional development activity and the context in which that activity functions. Finally, avoid relying on the temptation to only create mentoring pairs between students specializing in computers and writing research and students specializing in other areas within the field. Doing so could inadvertently reinforce the myth that the computers and writing specialist should be the primary source of information regarding technology integration. Like the faculty-to-student mentoring strategies described
earlier in this dissertation, the student-to-student mentoring relationships should encourage reciprocal mentoring to improve how technology functions throughout the professionalization process.

**Integrating Technology throughout the Candidacy Exam Process**

Understanding how technology is integrated throughout the candidacy exam process is limited by the data collected in Phase II. However, the data are able to indicate that there is more structured support for technology integration in taking the exam and notifying students about the exam process than there is for other components of the exam process. These case study results are not representative of how every doctoral program in the field integrates technology throughout the candidacy exam process but they do raise topics for programs to consider if they intend on providing more structured support for their students. Estrem and Lucas (2003) acknowledge that programs have long-held traditions for conducting candidacy exams that are influenced by department and institutional guidelines, thus creating challenges for modifying the exam formats. At the same time, programs dedicated to integrating technology throughout the entire professionalization process may find that it sends students mixed messages when lessening technology’s role in the candidacy exam process.

Improving faculty and student awareness about technology integration can still occur if programs keep some of the following suggestions in mind as they modify their current candidacy exam support strategies. Programs could incorporate more structured support by sharing technology integrated preparation strategies at various points within the program. For example, integrating different uses of blogs, wikis, RefWorks, etc. within coursework to develop reading/analytical skills could transfer to more structured support for these technologies once students have to prepare for their candidacy exams. This technology integration strategy to could
also help students envision how they may need to modify their approach as they make the transition to the dissertation process. Along the way, programs could lead students in guided reflections upon this type of technology integration to help them modify the technology use as students move into different stages of the professionalization process.

*Supporting a Technology Integrated Dissertation Process*

According to the data from this study, email, word processing software, library/internet databases, and data collectors are the most common examples of technology integration throughout the dissertation process. Because there are a number of challenges related to time constraints and institutional requirements, the programs in this study show that there tends to be less structured support for technology integration throughout the dissertation process unless the area of research is in computers and writing. As other programs consider how to better integrate technology throughout the professionalization process, there are a number of things that they will have to keep in mind before providing more structured support for students in the dissertation portion of this process.

With the exception of students independently choosing to integrate the use of technology throughout the dissertation process, the majority of the support they receive from their programs is through working with the chair and members of their committees. In this commonly used strategy for dissertation mentoring, the task of integrating technology effectively becomes the responsibility of each individual student and the chair of her committee. Placing this responsibility on only a small number of members within a program, however, makes it difficult for meaningful technology integration to occur throughout the professionalization process. Further, as Lang (2002) describes, variances among committee members’ familiarity with technology in past dissertation work can create challenges for supporting students who are trying
to integrate technology more effectively in their dissertations. These are some of the reasons for why programs may want to consider creating opportunities for structured technology integrated support for students earlier in the dissertation process so that it’s not just limited to the work they conduct with their committees.

Programs can still integrate technology throughout the dissertation process by providing opportunities for early dissertation work to be included in professional development workshops and student-to-student mentoring. Though students are less likely to commit to a dissertation topic early in the first half of their doctoral programs, technology can still be integrated as a means to help a student narrow her research focus as she approaches her candidacy exams. By including early dissertation work with technology integrated professional workshops and student-to-student mentoring, as described earlier in this chapter, students have more time to consider the role technology will play as they move forward into the later stages of the dissertation process. This strategy also allows for the committee chair and members to more equally share the responsibility for technology integration with other members within the program.

Though putting this suggestion into practice has the potential to improve technology integration throughout the dissertation process, there are still limitations for programs to consider as they find the strategies that work best for them. First, encouraging students to work with members of their program outside of their committee can be challenging after a dissertation topic is approved. Because the committee is more familiar with a student’s dissertation work than other members of the program, students could easily receive conflicting suggestions for how to integrate technology throughout the dissertation process. This could be frustrating for students and their committees while making it more difficult to integrate technology effectively.
Programs will also continue to face limitations due to the institutional requirements for submitting dissertation work, thus influencing the extent to which technology can be integrated throughout the final product. Finally, students who write with the intent to transform their dissertations into publications will have to consider the technology expectations of their chosen areas of specialization. Students specializing in areas where there are frequent electronic publication opportunities will need a different type of technology integrated support during the dissertation process than students specializing in areas where these opportunities are not available.

Incorporating Program-Level Assessment

In addition to balancing structured and less-structured professional support to students, graduate programs will need to incorporate more frequent opportunities for program-level assessment to improve their strategies for technology integration. According to researcher Richard Haswell (2001), meaningful program assessment considers the values and needs of numerous stakeholders (e.g. students, faculty, administrators). Though he is referring to program assessment in general, this approach is equally valuable to programs trying to improve their technology integration strategies. Because integrating technology should be a responsibility that faculty and graduate students share, assessing the program’s strategies should also be a shared responsibility. Further, it is necessary to have multiple forms of assessment for programs to understand how technology functions throughout the complex professionalization process. As Andrew Topper’s (2004) research shows, students’ competencies and feelings about technology integration are likely to change over time, thus influencing how programs support student development. Though his research focuses on technology integration within a graduate
educational technology program, his findings are worth considering as graduate programs in the Rhetoric and Composition field continue to evaluate their efforts.

Programs already assess themselves on a regular basis but not all programs examine technology integration closely enough to see where they are excelling and where they need to improve their professionalization strategies. For example, participants from the University of Massachusetts – Amherst indicated that each year a group of graduate students (Technology Fellows) works on a committee to examine how technology could be integrated in their first-year writing courses. This is one of the ways in which programs can consider assessing how well technology is integrated within this component of the professionalization process. Students who are Technology Fellows are able to develop their digital skills as teachers while also developing their skills as administrators dedicated to improving technology integration. These are two areas of professional development that are necessary for students to gain experience in as they continue to improve their technoliteracy skills as new members of the field.

Though the work of the Technology Fellows group is positive example for how programs can incorporate technology integrated program assessment, there is still the need for assessment in other aspects of the professionalization process. It is equally important to include graduate students in those assessment strategies for them to gain administrative experience and emphasize the need to share the responsibility for technology integration. Given the relatively frequent changes in demands for technology use and the integration of new technologies within the field and the academy, this type of program assessment should function effectively with the needs of faculty and students in mind. Because developing an entirely separate assessment committee with a strong focus on technology integration is not always feasible due to faculty and student
time constraints, programs may have to look for alternative methods that work with their current professional development and/or assessment strategies.

When professional development activities are already incorporated within the department (e.g. Third-Friday and Post-Prelim groups at Bowling Green State University), modifications could be made to also include more regular assessments of those activities. For example, Third-Friday meetings at Bowling Green State University are organized and led by a graduate student who is the Rhetoric and Writing Program Assistant. This student is also in charge of leading the Third-Friday Steering Committee with a group of graduate students to decide on monthly meeting topics. In this case, the program could include reflective assessment as part of this committee’s responsibilities at least once a semester. Reflectively assessing how technology is integrated throughout the Third-Friday meetings and the professional development activities discussed during those meetings could help the committee identify where it is excelling and where it needs improvement. Though primarily the responsibility of this committee, faculty members responsible for providing guidance during the Third-Friday meetings could also provide support to the Third-Friday Steering Committee with its assessment tasks. A similar strategy could be also be implemented within this program’s Post-Prelim professional development group for students in their third and fourth years of their degrees. In programs where professional development support is available through strategies that vary from those used at Bowling Green State University, faculty and students will have to collaborate to identify the best means for creating structured support while also making time to regularly assess how technology is integrated throughout that support.

Beyond incorporating assessment in the activities mentioned above, faculty and students should consider assessing technology integration as it functions in graduate seminars as well as
through different stages within the program. For example, programs using student evaluations to assess graduate seminars could modify their approaches to include assessments of technology integration in their graduate seminars. Prompts could be added to the current format of student evaluations that focus more directly on how technology integration in seminars played a role in students’ professionalization processes. In addition to this strategy, faculty could incorporate reflective assessment activities throughout the semester by asking students how their technology integration strategies functioned within each unit or at least during mid-term evaluations. To gather more information, programs could also ask students to assess their program’s technology integration efforts at different stages within their degrees. This could include brief reflective assessment activities after completing coursework, candidacy exams, completing the graduate lecture, and after the dissertation defense. Incorporating these activities at various milestones will allow programs to identify how students’ experiences with technology integration change as they pass through different stages within their degrees. It can also help programs see how and where students needs for technology integration change depending on where they are in the professionalization process. In response, programs can better understand how technology integrated professional support should be modified.

Many of the suggestions for assessment in this category focus on student-based assessment but this is not the only type that programs should use when reflecting upon their technology integration strategies. It is important to emphasize faculty-based assessment to understand how technology integration is functioning throughout the entire community of the graduate program. This type of self-assessment could include prompting faculty members to reflect on their technology integration efforts within their own professional development and through their experiences mentoring graduate students. Depending on the program, these self-
assessment activities could be included as part of yearly review processes. However, including it as part of the tenure and promotion review process would make it less useful for faculty and for programs due to the emphasis on proving how one’s professional work meets the necessary departmental and institutional tenure guidelines. That in mind, faculty self-assessment should be conducted by programs with the intention to learn more about how to better support faculty members as they integrate technology throughout their professional development and that of their graduate students.

As with any practical application for program-level assessment, these suggestions have their limitations. Assessing technology integration strategies could be challenging for doctoral programs with smaller numbers of students and faculty members because their available time is even more likely to be limited. Also, programs that choose to assign these types of assessment strategies to already-established committees may find that the strategies are not prioritized enough in comparison to the committee’s predetermined tasks. There is also the likelihood of some resistance to including graduate students on certain committees even if their presence allows programs to distribute the responsibility of technology integration more evenly among its members. Some of this resistance could come from student turnover as they complete their degrees, which could influence their familiarity with the logistics of their programs in comparison to faculty members who have served for several years. These limitations are important for programs to examine closely as they choose how to evaluate their technology integration progress. Though programs will likely find additional limitations as they put these suggestions into practice, continuing to share the responsibility for technology integration among faculty and students will help programs make the appropriate accommodations.
Continuing to Research Technology throughout the Professionalization Process

As explained throughout this dissertation, the findings and suggestions from this study should give researchers within the Rhetoric and Composition community some questions to ponder on technology integration and its role in the graduate student professionalization process. Members of the academic community who are interested in continuing this line of research might consider conducting a broader examination of doctoral programs within the field. In this study, only four programs participated which made it difficult to see how technology integrated professional development functions throughout the field. Studying more doctoral programs could help researchers identify trends in professional development approaches while raising awareness about possible areas for improving technology integration.

Increasing the number of programs studied, however, is not the only way to gain more information about the graduate student professionalization process. Researchers will need to study how programs with various levels of access to technology and varying program cultures address technology integration. This could help the Rhetoric and Composition community identify the types of support that graduate programs need to improve their technology integration strategies. Also, including more representative samples of graduate students from different stages within each program, recent alumni, and pre-tenured and tenured faculty will show researchers how programs are meeting the needs of members within their communities. Conducting longitudinal studies of students as they move through different stages of their programs could also show how technology integration changes throughout the professionalization process for each student. These are, of course, only a few of many directions researches will have to take as they continue to explore the complex nature of this process.
As this dissertation research shows, integrating technology throughout the graduate student professionalization process is a responsibility that can be rewarding but also overwhelming for faculty and students to assume. It is manageable, however. For example, Kathleen Yancey’s (2009) suggestions for re-seeing and re-mixing graduate education by finding a way to repurpose current strategies with new ones can help graduate programs ground themselves as they take on the large task of modifying their technology integration efforts. Yancey’s (2009) position within Florida State University’s graduate program, which had supportive faculty and the need for reorganization, allowed her to make substantial changes in order to “thread” digital technology throughout the program. While her experiences showcase several ways to improve a graduate program’s technology integration strategies, not all programs have the support and resources to do so on such a large scale. This should not, however, discourage programs from finding the strategies that work best for them. Instead, the experiences described through the case studies in this dissertation, Yancey’s (2009) research, and the research of others dedicated to technology integrated graduate education should inspire programs to continue their efforts. Preparing more technologically confident members of the Rhetoric and Composition community not only responds to the changing demands of a digital age but also enables members within the field to enhance their strengths as responsible literacy educators.
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APPENDIX A – PHASE I SURVEY/INTERVIEW QUESTIONS

Professionalizing Graduate Students by Integrating Technology (Phase I)

The following is a 20-minute survey intended to gather information about how technology is integrated throughout your program as a means for professionalizing graduate students both inside and outside the classroom. Please take some time to reflect on your (and your program’s) use of technology as it’s connected to educating your students and answer each question to the best of your ability. Your responses to these questions will be kept confidential through the use of pseudonyms, and will be revisited during our follow-up electronic interview should you choose to participate in that portion of the study.

1. What is your title? (Please check all that apply)
   
   o Institutional Administrator
   o Program Administrator
   o Tenured Professor
   o Non-Tenured Professor
   o Doctoral Student
   o Masters Student
   o Other (please specify)

2. How long have you held that/those title(s)?

   Institutional Administrator  ___________
   Program Administrator  ___________
   Tenured Professor  ___________
   Non-Tenured Professor  ___________
   Doctoral Student  ___________
   Masters Student  ___________
   Other (please specify)  ___________

3. Which of the following courses do you teach/or have you taken? (Check all that apply)
   
   o History of Rhetoric
   o Pedagogy
   o Research Methods
   o Computers and Writing
4. Explain how you’ve used technology in these courses.

The following questions should be answered by choosing the item on the scale that best represents your overall experience with technology at your institution. Please use the comments box if you feel the need to elaborate on or clarify your response.

5. Technology resources are readily available and accessible for use inside and outside the classroom.

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Comments
6. My program and/or institution creates opportunities for faculty and graduate students to develop and sustain their technology skills outside the classroom.

   strongly agree                     strongly disagree

   Rating  ○  ○  ○  ○  ○  ○  ○  ○

   Comments

7. Students are encouraged and prepared to publish scholarship electronically.

   strongly agree                     strongly disagree

   Rating  ○  ○  ○  ○  ○  ○  ○  ○

   Comments

8. Technology is incorporated throughout the dissertation process.

   strongly agree                     strongly disagree

   Rating  ○  ○  ○  ○  ○  ○  ○  ○

   Comments
9. Please select your willingness to participate in a follow-up electronic interview.

- Yes. I am willing to participate in a follow-up interview regarding my survey responses.
- Maybe. I am willing to participate in a follow-up interview regarding my survey responses, but my available time for doing so is limited.
- No. I am NOT willing to participate in a follow-up interview regarding my survey responses.
Follow-Up Interview Questions

The following is a 20-minute interview intended to get you to reflect on the questions you were asked during the electronic survey. Please type your responses after each question.

(1) With regards to question five, how do you negotiate the level of availability and accessibility of technology at your institution with your own ideal strategies for teaching or learning?

(2) Based on your responses to questions six through eight, how would you characterize your level of comfort with using technology as it’s situated among your research, teaching, and professional development activities?

(3) In regards to your response on question seven, how is the emphasis placed on publishing in print and electronic spaces distributed in your program?

(4) In regards to your response on question eight, explain what you see as an ideal use of technology throughout the dissertation process.

(5) What types of activities and support from your colleagues and your program motivate you to further develop your technoliteracies as a scholar in the field?
APPENDIX B – PHASE II SURVEY/INTERVIEW QUESTIONS

Professionalizing Graduate Students by Integrating Technology (Phase II)

The following is a 20-minute survey intended to gather information about how digital technology (e.g. course management software, Web 2.0 technologies, web-authoring software, e-mail, chat software, etc.) is integrated throughout your program as a means for professionalizing graduate students both inside and outside the classroom. Please take some time to reflect on your (and your program’s) use of technology as it’s connected to educating your students and answer each question to the best of your ability. Your responses to these questions will be kept confidential through the use of pseudonyms, and will be revisited during our follow-up electronic interview should you choose to participate in that portion of the study.

1. What is your title? (Please check all that apply)
   - Institutional Administrator
   - Program Administrator
   - Tenured Professor
   - Non-Tenured Professor
   - Doctoral Student
   - Masters Student
   - Other (please specify)

2. How long have you held that/those title(s)?

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<td>Other (please specify)</td>
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</table>
3. Which of the following courses do you teach/or have you taken? (Check all that apply)

- History of Rhetoric
- Pedagogy
- Research Methods
- Computers and Writing
- Writing Assessment
- Writing Program Administration
- Writing Across the Curriculum
- Basic Writing
- Scholarship and Publication
- Discourse Analysis
- Literacy
- Linguistics
- Professional/Technical Writing
- Writing Center Administration
- Other (please specify)

4. I have used the following technologies in at least one of the graduate courses I’ve taken/taught. Check all that apply.

- Course management software (e.g. Blackboard)
- Reference database software (e.g. Refworks)
- Podcasts (audio and/or video)
- Blogs, wikis, etc.
- Web-authoring software (e.g. Dreamweaver)
- Social networking sites (e.g. Facebook/MySpace)
- Video sharing sites (e.g. YouTube)
- Email
- IRC software (e.g. Instant Messenger)
- Other

If necessary, use the comment box to clarify your response.
5. My program and/or institution offer(s) the following opportunities for faculty and graduate students to develop and sustain their technology skills outside the classroom. Check all that apply.

- Program-specific pedagogy workshops that emphasize technology use
- Institution-wide pedagogy workshops that emphasize technology use
- Program-specific research workshops that emphasize technology use
- Institution-wide research workshops that emphasize technology use
- Program-specific publishing workshops that emphasize technology use
- Institution-wide publishing workshops that emphasize technology use
- Other

If necessary, use the comment box to clarify your response.

6. Advanced graduate students are given opportunities to advise new graduate students on technology use in the following areas. Check all that apply.

- Teaching
- Completing coursework
- Preparing conference presentations
- Preparing publications
- Taking candidacy exams
- Dissertation work
- Preparing for the job market
- Other

If necessary, use the comment box to clarify your response.

7. Technology is integrated throughout the candidacy exam process in the following ways. Check all that apply.

- Notifying graduate students of how the exam process works
- Studying for exams
- Taking exams
- Assessing exams
- Other

If necessary, use the comment box to clarify your response.
8. Technology is incorporated throughout the dissertation process in the following ways. Check all that apply.
   - Correspondence among doctoral candidates and committee members.
   - Distributing and providing feedback on chapter drafts.
   - Gathering and organizing source material.
   - Collecting and analyzing data.
   - Drafting the dissertation (through the use of text, image, audio, etc.).
   - Defending the dissertation.
   - Depositing the dissertation (e.g. electronic thesis and dissertation).
   - Other

If necessary, use the comment box to clarify your response.

9. Please indicate the extent to which you agree or disagree with the following statements by filling in the blank with the following options.

As future faculty, graduate students are prepared to integrate technology throughout their roles as ___________.

<table>
<thead>
<tr>
<th>strong agree</th>
<th>strongly disagree</th>
</tr>
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<tbody>
<tr>
<td>Teachers</td>
<td>○ ○ ○ ○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>Researchers</td>
<td>○ ○ ○ ○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>Administrators</td>
<td>○ ○ ○ ○ ○ ○ ○ ○</td>
</tr>
</tbody>
</table>

If necessary, use the comment box to clarify your response.

10. Please select your willingness to participate in a follow-up electronic interview.

   - Yes. I am willing to participate in a follow-up interview regarding my survey responses.
   - Maybe. I am willing to participate in a follow-up interview regarding my survey responses, but my available time for doing so is limited.
   - No. I am NOT willing to participate in a follow-up interview regarding my survey responses.
Follow-Up Interview Questions

The following is a 20-minute interview intended to prompt you to reflect on your experiences with integrating digital technology (e.g. course management software, Web 2.0 technologies, web-authoring software, e-mail, chat software, etc.) throughout your graduate program. Please type your responses after each prompt.

(1) Describe a situation where you used technology in a graduate course (as a teacher or as a student) to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?

(2) Describe a situation where you used technology (as a student or as a faculty advisor) to achieve a specific professional development goal(s) (e.g. for a conference presentation, a publication, committee work, administrative work, etc.). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?

(3) Describe a situation where you used technology (as a student or as a faculty advisor) in the candidacy exam or dissertation process to achieve a specific goal(s). In what ways did it help you enhance and/or inhibit your ability to achieve your goal(s)?

(4) What types of activities and support from your colleagues, your program, and/or your institution motivate you to further develop your technoliteracies as a teacher, researcher, and/or administrator in the field? Why?

(5) How have the experiences you’ve mention above (and/or other experiences not mentioned here) influenced your understanding of how technology should be integrated throughout the graduate student professionalization process?