This book attempts to re-imagine the purpose of the doctorate, which has historically been used to prepare leaders who will work to improve the sciences (social and physical), humanities, and professions, while articulating curriculum as a living shape where students, faculty, and institution melded in a humanist and creative process. This idea, seriously eroded by the explosion in doctoral degrees between the early 1970s (20,000 doctorate per year) and last year (to over 46,000)—and an explosion in doctoral and research universities, that has created a crossroads for the doctorate in America. We believe the value of a doctorate is Intellectual Capital, and are particularly interested in encouraging reflection as an important characteristic of a successful quality doctoral program. We posit that a “good doctoral” experience fosters active engagement in reflection on all elements of our work—the intellectual, advisory, and pedagogical work of faculty, curricular opportunities, as well as the intellectual of the doctoral candidates through an avocation that drives research and theory in our fields. Specific issues raised in this edited volume include comprehensive analysis of programs, rethinking evaluation and programmatic coherence, doctoral degrees beyond the discipline, subject, and field, and implications of individual identity. Along with authors’ chapters, we paid attention to encourage reflection as an important characteristic of a quality doctoral program; positing that “good doctoral” experiences foster active engagement in reflection on all elements of the doctoral experience, including program and curricular issues, personal relationships, work, and the creation of a community of scholars.
Higher Education and Human Capital
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Re/thinking the Doctorate in America

Edited by

David M. Callejo Pérez
Saginaw Valley State University

Stephen M. Fain
Judith J. Slater
Florida International University
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INTRODUCTION

The Doctorate and Cultural Capital

Initially, the doctorate of philosophy welcomed the emerging scholar into a special community. With the emergence of research institutions such as Johns Hopkins and the University of Chicago at the turn of 20th century, the scientific model became the norm of the US doctorate for the next 100 years. The purpose of the doctorate in US has historically been to prepare leaders who will work to improve the sciences (social and physical), humanities, and professions. While, the more classical degrees in the languages, humanities, and arts remained grounded in scholarly pursuits of the Humanities; and served to replenish the ranks of the professoriate with elite graduates from elite institutions. The National Science Foundation’s 2006 publication A Brief History of the Doctorate sheds light on the evolving academy in the United States. With the emergence of pragmatism it is not surprising that a scientific approach muted the humanistic characteristics previously associated with advanced academic pursuits. For example, according to 2006’s A Brief History:

Of the more than 1.35 million doctorates awarded by universities in the United States between 1920 and 1999, 62 percent were in science and engineering fields—but more were given out in education than in any other single discipline in every year from 1962 on.

Although men received 73 percent of the doctorates throughout the century, the proportion earned by women rose from 15 percent in the early 1920s to 41 percent by century’s end. Among other demographic changes: The proportion of Ph.D.s earned by members of minority groups rose to 14 percent in the period from 1995–99, up from 6 percent in 1975–79. And foreign nationals earned almost one of every three doctorates granted by American universities by the late 1990s, up from one in four just a decade earlier.

Fifty baccalaureate institutions produced more than a third of the people who went on to earn doctorates between 1920 and 1999. Of those 50 institutions, Oberlin College was the only one that does not itself award doctorates. (Oberlin ranked 35th.) Community colleges played an increasing role in the doctoral pipeline, the report found: More than 11 percent of all U.S. citizens awarded doctorates in 1995–99 had attended two-year colleges, up from about 10 percent in the late 1970s. But the overall proportion of doctorate earners who had attended a community college actually fell to 8 percent from 9 percent, seemingly
because of the significant increase in the number of foreigners in the pool of doctorate earners.

Ph.D. recipients have increasingly had to go into debt to earn their degrees. By 1999, for the first time, more than 50 percent of graduating doctorate earners had accumulated education debt, and the proportion who said they owed more than $20,000 had climbed to 20 percent, up from less than 7 percent a decade earlier.

In other words, what the 2006 Report illustrates is that the Doctorate has now become more commonplace. This shift can be traced to two dimensions associated with the research model; first, the use of students as laborers on highly funded research projects leading to commercial outputs and second, a need to generate high productivity student credit hours at the advanced graduate levels at institutions seeking high academic status. This second characteristic is exacerbated by the effect of ranking systems based on such production (i.e., Carnegie and US News and World Report).

The research model has long driven the idea of the doctorate; it was not mean to be that way. It was traditionally accomplished through critical thought, research, and reflective practice related to expanding existing paradigms of knowledge or to creating new knowledge that impacted society. Doctoral programs in Research Universities stressed the importance of research and study in a social context, grounded in the realities of society. Doctoral students would become part of a community that links scholars with practicing professionals, policy makers and thinkers. Doctoral students were to conduct research, and critically examine their disciplines, fields, or subject areas; expanding their content knowledge through linkages with faculty in opportunities with faculty to conduct research (as a team member or side-by-side) and gain an understanding of the forces that both shape and are shaped by the creation of knowledge and its impact on society. Doctoral Programs were to articulate curriculum as a living shape where students, faculty, and institution melded in a humanist and creative process. The process creates a space where participants risk their beliefs and we embark alongside each other through a curriculum of authenticity undergirded by the relational dynamic between teachers as students and students as teachers.

However, this idea has been seriously eroded by the explosion in the granting of doctoral degrees beginning in the early 1970s (20,000 doctorate per year) and culminating in the 2000s with over 46,000 yearly doctorates. In 1980, less than 100 institutions saw themselves as doctoral and research, by 1990 that number had increased to over 200. According to Carnegie Institute for the Advancement of Teaching there are 300 plus Doctoral Granting Sites and about only 25–30% of Degree Recipients Teach or Do Research in Higher Education. An upturn in the economy after 1998 followed by a fast downturn in 2001, changes in technology (i.e., Windows) let students seek alternatives to traditional doctoral programs. During this time, of the 40,000 average yearly graduates with doctorates, many more came from non-traditional programs (traditional Universities with large online programs—Maryland, Nebraska, Penn State; and from non-traditional programs such as Argosy and Phoenix). The growth of online/Internet based universities and for-profit schools that offer doctorates have also been a boon to Doctoral Programs in increasing
INTRODUCTION

However, this has led to a new problem. Diploma mills such as Argosy or Union or Nova Southeastern have begun to outnumber traditional degrees in many professions, such as Psy.D. (Zweback 2008). In the wake of the Alberto Gonzalez scandal, the public learned that Regents University, a Christian non-accredited law school, had more lawyers working in the Justice Department than the top five American Law Schools, including Harvard, Yale, and Michigan.

Another emerging problem is that universities have used the economic downturn to adjust tenured faculty. Several reports from the American Association of University Professors (2009a; 2009b) and the Collaborative on Academic Careers in Higher Education (COACHE) at Harvard University (COACHE 2009; Helms 2010) have pointed at the perceptions and realities of faculty, including that only 30% are on tenure/tenure-leading appointments, the types of institutions that hire, and the beliefs of Generation X faculty. All these go to the heart of the matter. Our doctoral students are different and the institutions they will work in are different. Ironically, we continue to prepare doctoral students like we have in the past, have expectations of them that do not match their identity, and are preparing persons for jobs that no longer exist.

A current colleague explained that she felt like an endangered species—watching her tenured colleagues retire and replaced by contract professors. It dawned on her—because you needed tenure or be tenure-line to serve on the five committees her department had to have—she was the last tenured member of her department at a major research university.

Governing Boards and University Presidents have used the economic downturn to re-constitute the university to resemble to for-profit institutions labeled anti-intellectual several years ago. Using the justification of being in-tune with their students’ needs, responsibility to their alumni and partners, and improving access; universities have used the faculty and tenure as resistors to change. Because of the bad economic times, universities have allowed a number of their tenure-track positions to die by natural attrition, as faculty members have left or retired (Chronicle 2010). Ironically, as they cite student friendly universities, administration outsources student room and board, activities and healthcare. Another change is that of universities like Arizona, “when the vice provost for academic affairs goes on sabbatical in January, the vice provost for educational technologies, who had been on sabbatical for the fall semester, will come back not only to handle the responsibilities of her own job, but also to oversee those of her colleague (Chronicle, June 2009).” In Minnesota-Twin Cities and at the University of Georgia, the universities are seeking to raise their base teaching load to 3–3 to address economic shortcomings. The NY Times quoted a member of the Board of Regents saying “adjuncts are excellent teachers and bring real-world experience to the classroom.” He hoped that he could find a way to replace more professors with these good teachers. Some colleges and universities are choosing to fill teaching slots with visiting faculty members and other temporary full-time appointments. They hire these new “limited-term” positions — to cover cuts in so many budgets cuts. The logic is that in two to three years, when the “limited-term” contract runs its course, there may well be money for a tenure-track hire. However, as we have witnessed once these lines are cut, they are never regained or end up in corporate-driven areas. As we know, student enrollment, after all,
increases in times of economic recession. Someone has to teach them, and unless
tenure-track professors are prepared to have their course loads eventually doubled
or tripled, it will continue to be adjuncts and non-tenure-track full timers. Thus, as
many students undertake, work in, and finish their doctoral programs, this is the
place where many will seek to work. In our estimation, we have created this book
to provide a sense of direction in these changing times, where the authors write in
deepth about doctoral programs, as advisors, students, recent graduates, and experts;
giving the readers a sense of the landscape that encompasses the doctoral degree as
cultural capital in higher education.

ORGANIZATION OF THE BOOK

In light of the changing nature of the doctoral degree, the Carnegie Institute for
the Advancement of Teaching (which ranks universities according to research
production) began two initiatives, one aimed at the idea of university research and
the second at the doctorate itself. This book takes on the second idea, the Carnegie
Initiative on the Doctorate and asks: How far have we come? If the ultimate value of a
degree is its Intellectual Capital, then have universities chosen to increase its net
worth or remain wedded to the degree as a certification.

Carnegie’s Initiative asked that we foster thoughtful deliberations, aimed at
achieving an adequate and comprehensive account of the doctoral program’s
intellectual and performative qualities. It created four rubrics to measure all doctorates
of purpose (meaning the direction and understanding of a program’s expected out-
come), assessment (meaning the strategies for determining how well a program does
in achieving its expectations), reflection (meaning a program’s on-going habits of
reflection about its aims and strategies), and transparency (meaning the extent to
which the relationship between purpose, assessment, and reflection in a doctoral
program are readily discernable to all elements of the program). For the purpose of
this book, the invited authors will revisit each of the four crucial parts of the doctorate
(1) Purpose; (2) Assessment; (3) Reflection; and (4) Transparency. Each section
will feature essays from doctoral students, doctoral faculty, and assistant professors
(or recent graduates) who will address their experiences through narratives and
vignettes addressing the question of “how far have we come?”

We are particularly interested in encouraging reflection as an important
characteristic of what they imagine to be a successful quality doctoral program; we need to re-visit the inclusion of the core curriculum in the doctorate. Addressing
the focus of the doctorate engenders a discussion as to the core values held by any
doctoral program (usually described in Doctoral Programs Mission and Goals) and
its graduates. We posit that a “good doctoral” experience fosters active engagement
in reflection on all elements of our work—the intellectual, advisory, and pedago-
gical work of faculty, curricular opportunities, as well as the intellectual work of
the doctoral candidates themselves—through work that drives research and theory
in our respective fields. Specific issues raised in this edited volume include the
selection processes, developmental progress expectations, methods of assessment/
evaluation, and data on placement, time to degree and completion rates of doctoral
students, experiences as new faculty, and proposed changes for the future. Also, the idea of intellectual capital involves agency into what doctoral work involves in such organizations, institutionalized opportunities for reflection and feedback between graduate students and faculty mentors. While students typically find many opportunities to interact and support each other, departments should structure opportunities to facilitate and encourage discussions among graduate students and faculty about important developmental issues, career goals, etc. Creating community is a strong recommendation from many of the national studies.

The book is divided into four sections addressing how far have we come in doctoral education. The first section, *A General Approach: Comprehensive Analysis of Doctoral Programs*, has three chapters that address the preparation of future faculty, the future of the professoriate, and the fostering of researchers. The first chapter, by Monica Fox, Stephanie, Adams and Ingrid St. Omer, approaches the doctorate degree to positing that informal as well as formal experiences greatly impact the experience; and that an emphasis on these multiple factors will greatly help the success of the graduate. By beginning with the idea of mentorship, we set the tone for our belief that relationships drive all human endeavors. Donna Adair Breault examines the life of the professor and the irony of time. Currently, professors are required to do more work from both the office and home; are victims of the institutional system that requires one to be an expert, and struggle to balance between professional development and duties to the institution. Adair Breault de-romanticizes the faculty myth while at the same humanizing the individual and opening doors to conversations about why this occurs. The last chapter in Section I, *Re/thinking Research Training* by Luis Mauricio Rodriguez-Salazar and Carmen Patricia Rosas-Colin, agrees that there needs to be a path between the loneliness of research and the need to collaborate. They see mentorship of new doctoral students, as a key to building a road and a bridge that will close the gap in preparation of graduates and increase the idea that research is an active and cooperative effort.

In Section II: *Rethinking the Concept of Evaluation and Programmatic Coherence*, Martha Combs and J. Randall Koetting’s reflective essay takes the reader on a journey through the creation of a doctoral program at a small university by reminding us that the degree is more than a set of standards, courses, and exams—it is a journey to a new way of life. Building on this powerful essay, M.O. Thirunarayanan, proposes that we begin to consolidate degrees. His thought-provoking proposal asks that we look at the criteria for offering a doctoral degree rather than the discipline, allowing recipients to have a voice in their education, and for professional degrees examine the relationship among the institution and where graduates will work. The key to this chapter is that we ask why we offer the degree we offer. In order to bring this section to a close, Sebastian Diaz returns to the ideal set forth by Combs and Koetting. He asks that we use knowledge management as a tool for evaluating advanced graduate programs. Like the impact of Facebook or MySpace on social networking, Knowledge Management can help with our goal to create new knowledge and help it be freely disseminated.

The third section, *Beyond Practice: The Doctoral Degree Beyond the Discipline, Subject, and Field*, begins with the authors examining quality doctoral education
from specific disciplines and fields and asking that we examine the power of these ideas to all doctoral education. In the Ed.D. v2.0, William White and Jason Grinnell delve into the argument between the research and applied doctorate. Taking the field of Education as their foundation they offer that there is much that can be provided by education specialists that can infuse the research doctorate and the production of knowledge—that the degrees need to be seen as part of a larger collective informing knowledge rather than two separate doctorates. In the next chapter, Anthony Normore and Lynne Cook write about the path taken by their institution in the development of their new Ed.D. As discussed in Section II, the authors address the importance of mission, stakeholder involvement, and participation in developing a robust and sustainable degree that will one day produce those who will change and improve our schools. This chapter is also influential because of its ability to allow the reader an insight into the difficult road to grow a program. The third chapter in this section is about the Ph.D. in Mathematics and Science Education. Robert Mayes, Patricia McClurg and Timothy F. Slater describe the experiences at the University of Wyoming in their collaborative development of the Ph.D. in Math and Science Education with the disciplines they work within. With the growing emphasis on STEM disciplines this chapter allows the reader to understand the idea of knowing and teaching when addressing disciplines in education, and math and science.

The last section: The Implications of Individual Identity Within the Doctorate, is the largest—and in some cases the most poignant and personal as researchers recount their personal narratives as students and faculty. Madeleine Grumet (1988) has described narratives as “masks through which we can be seen (p. 67).” We must remember that in narratives, human beings are limited by the boundaries of social and linguistic rules/practices. In this section we begin with Diane Rodriguez and Kenneth Luterbach’s chapter on recruiting culturally and linguistically diverse students into Special Education. In this chapter, the authors use their own experiences and knowledge to deconstruct how we treat diversity and language (more politically than as a necessity) for quality education. In this sense, they believe that technology is the key to recruiting and retaining diverse faculty. The highlight of this chapter lies in that the authors ask that we take the same care for graduate programs that we do to recruit undergraduates. The next chapter has Meadow Graham, Sarah Selmer, and Erin Goodykoontz focusing on individual students’ experiences and the development of an academic identity. The human element needs to receive the largest consideration in preparing doctoral students, including providing space for narrative reflection and identity. Andrew T. Kemp, Joseph Flynn and Samara Madrid bring those influences that guide our decisions as faculty to light in their chapter on negotiating the tenure-track journey. In the compilation essay (parts appeared in the Chronicle of Higher Education), the authors discuss the essence of their unique and collective experiences at Northern Illinois as new faculty from different places, ideas, and areas of study. This potent essay recounts a year in their lives and includes personal narratives of a university shooting, problems in their personal lives, and the realities of work that one is not prepared for in graduate school where one must be patient, collaborative, and reflective. Building on the idea of change and identity, Pablo Toral recounts his experiences as a professor of international relations in a liberal
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The idea that the doctorate is to generate knowledge in research needs to be broadened. Toral writes that we need to embed this approach to develop additional advisory and pedagogical skills. In this sense, this chapter is a personal journey where new faculty must channel the training given doctoral students to devote energy in research to being an advisor and teacher. Since many of the graduates will work in Liberal Arts Colleges and Comprehensive Universities, as advisors we need to understand those institutions’ missions in preparing our students. Like Toral’s journey of self-discovery, Janice Sandiford reflects on her career as an advisor for over 30 years to provide the reader a new examination of those watersheds of the program, the program of study, coursework, assessment, the dissertation, supervisors, faculty load, and programmatic financial stability. By focusing on these issues, Sandiford tells the reader that we can be honest and transparent with students, faculty and programs. In the last chapter, Joshua J. Ode builds on the arguments put forth by Toral and Sandiford by asking that re/thinking the doctorate involves rethinking our goals as faculty at our new institutions. Like Toral’s dilemma, Ode works at a regional university and addresses how a faculty member trained in scientific research can generate research of service and teaching to create impact while continuing to be engaged in one’s discipline. In this concluding chapter, Ode provides insight on how the meaning of impact has changed for him as he transitioned from a doctoral student to an assistant professor at a small university and attempted to create an impact at his institution and his field.

CONCLUSION

When we speak of graduate education. Greater efficiencies and general reform drive the critics and thinkers alike and there is very little support for efforts directed at releasing human potentials. Today education is ensnared within a paradigm of efficiencies. Additionally, graduate programs and in particular faculty and tenure, have become straw men attracting criticism from those who seek to direct and control the activities generally associated with the development of a professoriate.

CULTURE: INSTITUTIONAL COHESION AND IDENTITY

Doctoral programs need to be connected and flow from ideas and thoughts about change and practice (both traditional and innovative). Research, Albers (1965) writes, is the ability to search and search again—to see as Hannah Arendt (Passerin d’Entreves, 1993) suggests, the idea of fragmentary historiography, one that seeks to identify the moments of rupture, displacement, and dislocation in history. Such fragmentary historiography enables one to recover lost potentials of the past, in the hope that they may find actualization in the present. For Arendt (1958), “it is necessary to redeem from those past moments worth preserving, to save fragments from past treasures that are significant for us” (p. 4). Only against the grain of traditionalism and the claims of conventional historiography can the past be made meaningful again, provide sources of illumination for the present, and yield its treasures to those who search for them with “new thoughts” and saving acts of
remembrance (Passerin d’Entreves, p. 5). As critics of the preparation of the future professoriate (doctoral programs), we defer to Robert Dahl (1970) who writes that “though you would find it less tidy, it would not be absurd for you to start with your own proposed solutions and work backward” (p. 166). In order for us to become active in doctoral leadership, we need to move away from the current disinvestment occurring in our universities and develop proposals for change in our institutions (Molnar 1986).

We suggest that we look inward and reassess how to measure learning—rather than looking outward at other institutions. As professors we have to keep in mind is that the impetus, planning, and budgetary support for the current curriculum revision taking place in universities comes from outside the universities. The reformers, who are ultimately legally responsible to their benefactor, the federal government and economic interests (including state governments), do not take into account the unique contexts of universities and people that the authors explore in this edited work. Ironically, few doctoral programs have devoted serious time to what their programs are about or what ideals they should be trying to achieve; instead, they often cling to the notion of control while allowing external and impersonal relationships to make the most important decisions about their programs. The major problem with doctoral education today is that too much decision-making takes place in within boardrooms instead of in universities and with faculty. These conversations and their consequences often take professors, programs, and universities by surprise (i.e., accountability for student learning); they often never see changes coming. In the end, some choose merely to accommodate and follow mandates, no matter how obtuse or ill-informed they may be. Others are more sinister, choosing to call themselves “researchers” and stating that their purpose is to drive knowledge when in reality they limit its growth.

Doctoral faculty have unique insights on their students’ creative thinking, problem solving, and most importantly, the connections they make to themselves, others, texts, and the world. Narratives (rather than quantitative data) make excellent records of how learners think and provide an alternative assessment that can show growth among students (Kohl, 1967; Meier, 2002). Student work is more than merely a benchmark; it is the foundation of growth toward learning. Significance of learning cannot be determined by the size of the quantitative measurement (statistical) but by what it represents. Concurrently, we must run away or dismiss the use of data; we need to think about data as a living and dynamic history of our programs. As Dahl (1970) writes, revolutions emerge from individual solutions to common problems. We need to consider all solutions—search out multiple successful ways to measure impact.

Eisner (1979/2008, p. 203–210) suggests that:

Tasks used to evaluate what the students know and can do need to reflect the tasks they will encounter in the world outside schools, not those limited to schools themselves. Evaluation tasks should think about more than one possible solution and one possible answer to a problem.

Tasks should have curricular relevance, but limited by the curriculum itself.
INTRODUCTION

Tasks should require students to display sensitivity to configurations or wholes, not simply discrete elements.

Tasks should permit the student to select a form of representation they choose to use to display what has been learned.

The tasks used to evaluate students should reveal how students go about solving a problem, not only the solutions they formulated.

Tasks should reflect the values of the intellectual community from which they are derived.

Tasks need not be limited to solo performance. Many of the most important tasks we undertake require group efforts.

Guided by Eisner, we posit that doctoral education and its outcomes are a process, a series of authentic conversations, which are public and open. Doctoral education should be rooted in a strong commitment to contribute positively to the challenges confronting universities today. It has to address the social, historical, psychological, political, economic, and philosophical context of the professoriate. Advisors and students need to (a) engage in an active process of questioning that examines what is visible and hidden in an aesthetic method, intended to foster close links between theory and practice, (b) develop leadership skills to affect change, and (c) prepare for a wider understanding of research, teaching and service, confronting the complexity of the professoriate in traditional and non-traditional educational settings.

REFERENCES


CONTRIBUTORS

David M. Callejo Perez is Carl A. Gerstacker Endowed Chair in Education at Saginaw Valley State University.
Stephen M. Fain is Professor Emeritus and Faculty Athletic Representative at Florida International University.
Judith J. Slater is Professor Emerita at Florida International University.
SECTION I:
A GENERAL APPROACH: COMPREHENSIVE ANALYSIS OF DOCTORAL PROGRAMS
INTRODUCTION

What does having a Ph.D. say about you or about your accomplishments? The current process for obtaining a Ph.D. confirms that you can follow directions and complete a task, can pass courses and a comprehensive and/or qualifying exam, can conduct independent research, and can one’s research findings. But what else does it say? Does having a Ph.D. mean you are a good teacher, advisor, mentor, grant writer, or independent thinker? Does it mean you are ready to guide the next generation of Ph.D.’s? Upon graduation, there is variability in the skills demonstrated by new Ph.D.s? Whose responsibility is it to train Ph.D. recipients in areas in which they are weak? Does this responsibility rest on the major professor, the dissertation committee, the department, or the institution?

Many have approached doctoral education as a “sink or swim” exercise. The strongest, most determined doctoral students are those who not only survive the process but identify effective practices that help them to be successful during the Ph.D. process and beyond. This random approach of pursing a Ph.D. is no longer sufficient. Doctoral training should not be left to chance. Given the purpose of a Ph.D. and the leadership opportunities given to Ph.D.s in academia, industry, government, and non-profit sectors, one would expect training of doctoral students to be more consistent across disciplines, departments and institutions within the United States. Although programs such as Preparing Future Faculty (Preparing Future Faculty, 2009) and Re-envisioning the Ph.D. (Nyquist & Woodford, 2000) provide resources for students considering or pursuing Ph.D.s., students who actively seek such resources are the most likely to benefit from the guidance offered on these websites. For the reasons listed thus far, this chapter presents information about the origins and the purpose of a Ph.D.; provides stories about the Ph.D. experiences of the authors along with common themes across these experiences; presents the skills needed by Ph.D. students upon completion of their degrees; and offers alternative models and additional measures that might be used by departments and institutions to level the playing field for all those pursuing doctoral degrees.

ORIGINS AND PURPOSE OF THE PH.D.

The Ph.D. has held much prestige across the world for centuries and the goal of the Ph.D. has changed over time. The first doctoral degree was granted in Paris in
the 12th century (Bourner, Bowden, & Laing, 2001). The first Ph.D. was granted in Germany in the early 19th century. The original purpose of the doctorate was to grant a license to those who desired to teach and to allow individuals to issue legal opinions. According to Wellington, Bathmaker, Hung, McCullough and Sikes (2005), the term “Ph.D. degree” did not acquire its modern meaning as the highest academic doctoral degree until the early 19th century. As Wellington et al. (2005) explain, prior to the 19th century, professional doctoral degrees could only be awarded in theology (Th.D.), law (J.D.), or medicine (M.D.). Bourner et al. (2001) found the differences between the Ph.D. and professional doctorates to occur when examining career focus, research type and focus, and delivery methods. Related to training and research, Bourner, O’Hara, and France (2000) emphasize the practitioner centered-ness of professional doctoral training as opposed to the knowledge generation orientation of the Ph.D.

Regardless of field, the Ph.D. represents attainment in scholarship and confirms students’ abilities to conduct original research and their potential to become experts in their disciplines or research areas. The degree is granted chiefly in recognition of the candidate’s high attainments and ability in a specific field, as shown by work on the required examinations covering both the general and the special fields, and by the preparation of a dissertation. More specifically, during a doctoral experience, a student identifies a research problem and studies it until he/she demonstrates an ability to produce research that is considered to be significant within the academic community. This determination is made towards the end of a student’s experience by a small group of committee members, who, dependent upon current views and expectations and prior experiences, determine if a student’s work fulfills the requirements of a department or of the graduate school. The criteria, however, as to whether a dissertation is barely acceptable or stellar varies greatly across academic programs and by field (Lovitts, 2007). Knowledge within the dissertation may be disseminated via a document that may be read by some academicians, primarily within the area in which the doctoral student received his/her doctorate.

Although research is mandatory within Ph.D. programs, other activities are optional. Among these optional activities include teaching and grant writing. Such professional development activities vary by university and by discipline and are initiated usually by students. Without formal pedagogical training, many Ph.D. students model the practices of their professors and resort to lecture as their primary way of presenting content to their students (Rugarcia, Felder, Woods, & Stice, 2000; Cox & Cordray, 2008). Researchers have found that most graduate students with teaching experiences often receive limited pedagogical training (White, 1993; Bomotti, 1994; Rushin et al., 1997; Shannon, Twale, & Moore, 1998; Golde & Dore, 2001), little useful information in their pedagogical training sessions (White, 1993; Tang & Sandell, 2000), and little to no mentoring from faculty supervisors within the courses they are teaching (Baiocco & DeWaters, 1998).

Researchers have identified general expectations of many Ph.D.s. Astin and Wulff (2004) note that future faculty will need to possess several characteristics beyond the ability to publish and to present research. Among these skills include communicating with individuals inside and outside of the academy; being effective teachers; and
comprehending teaching and learning processes. Despite these recommendations, many assumptions about doctoral education still exist. Among these include the following:

- Students who obtain Ph.D.s want to become professors.
- Only the best doctoral students become professors.
- The career paths of Ph.D.s are linear (i.e., Ph.D. to assistant professor, associate professor, and full).
- Ph.D.s choose the best job offer without considering relationship and family concerns.
- Professors enjoy higher levels of job satisfaction than other employment groups (Nerad, 2009, p. 80)

Without effective mentoring and discussions with faculty about these assumptions, it is easy to understand why Ph.D. attrition rates have remained at 50% for decades (Lovitts, 2001). It also illustrates the dichotomy that exists between the traditional nature of graduate programs and the current realities of professional life.

AUTHOR REFLECTIONS ON PH.D. EXPERIENCES

Before proposing ways to enhance the experiences of Ph.D.s, the authors reflected upon their personal doctoral experiences. The purpose of this was to understand similarities and differences in their experiences and to determine the positive and the negative aspects of their experiences. Details about these responses are presented below.

Dr. Adams’ Doctoral Process

I entered Texas A&M University (TAMU) in January, 1995 to obtain a terminal degree. I was interested in a terminal degree and a career in industry. I had hopes of becoming a corporate trainer or working at a corporate university. I was interested in combining topics in the fields of engineering and business. My specific areas of interest upon my arrival at TAMU were total quality management and engineering management. I chose to study at TAMU because they offered a number of degrees that would prepare me to meet my career goal while focusing on my desired interests. At the time I was admitted I was interested in either the Ph.D. in Industrial or Interdisciplinary Engineering or a Doctor of Engineering (D.Eng.) degree.

Initially, I thought the D.Eng. would be the right degree for me as it focused on preparing individuals for professional engineering careers in business, industry and the public sector. It was not intended to be a research degree or as preparation for a faculty position. It was designed for individuals who wanted to make and to understand technological advances implemented through business and industry require direction by persons possessing both high technical competence and professional understanding of the social, political and institutional factors involved. The D.Eng.
Program emphasized engineering practice, public service and the development of leadership potential, not basic research.

There were advantages to each and what I needed was time to sort it all out. My advisor, who ultimately became and still is a mentor, allowed me to do just that. She encouraged me to research other institutions that offered programs in my area of interest, study the types of courses their students took, where their graduates went after graduation and the various requirements of their programs. In parallel with this task she encouraged me to really examine the three programs so I could make an informed decision.

At the conclusion of my first semester she challenged me to write a paper summarizing what I had learned from my research, and once completed, I decided on the Interdisciplinary Engineering (ITDE) degree. The ITDE degree was developed to accommodate students who wish to study in fields or disciplines that cross departmental, college, or school lines. In my case, my degree was comprised of courses in engineering, business, and education. I believed that this degree would give me more options in the long run. Due to the flexible nature of the program, I was allowed to craft a program that spoke to who I was at the time, an engineer with an interest in management, in how people work together and a desire to improve these experiences in the workplace.

In hindsight I appreciate her approach to my admissions process. I was admitted fully funded and provided time and opportunity to find my niche. I think more programs should consider this approach. I was fully funded and my funding was flexible enough that it allowed me to find my passion and pursue it. As I moved forward the remainder of my doctoral process was fairly traditional. I formed a committee whose background matched my interests. My committee members were from the following backgrounds: industrial engineering, management, systems engineering and electrical engineering. I was still required to complete courses, pass a comprehensive exam, present a proposal and conduct research.

My research project grew from my interest in teams. Initially, I was interested in the role that team played in the creative process. I performed a review of the literature, identified an instrument to use and data collection site. I was encouraged that things were coming together so smoothly, or so I thought. Just as I was about to begin my data collection process at a Fortune 100 company, their leadership changed and all external access was closed. I was left to rethink my project and begin again.

During this time my mentor suggested I begin teaching. Since I had no immediate interest in an academic career, the opportunity to teach did not really grab me. Little did I know she was setting me up. After a few semesters of teaching she began planting the seed that I should consider a career in academia. Slowly but surely she made sure I got the preparation I needed to be a viable candidate for an academic position. As a part of our fellowship we were required to attended professional development seminars focused on teaching and research. In these seminars we discussed the following types of topics: preparing a strong vita, the academic job search process, institutions types, preparation of a good syllabus, teaching pedagogies, writing for publication and grant writing and awarding processes.
My mentor also encouraged me to publish early on whether it be conference proceedings or journal publications. As my doctoral studies neared completion I began my job search. I was primarily applying for corporate training positions. My mentor suggested I also apply for academic positions. As I began to tailor my job search materials for an academic position, I realized that all along she had been preparing for this process. I was ready.

I ultimately received three offers: two academic and one industrial. Much to my surprise, the choice was more about institutional fit than about industry versus academia. In the end I chose an academic position. I have no regrets about my choice and in hindsight, I have done relatively well as a result of my choice. There are, however, some additional skills I wish I had had such as having had more opportunities to identify and to hone the skills necessary to be a successful faculty member. Specific skills include grant management, managing graduate students and lab resources and structuring articles for publications. I also wish I had had an opportunity to really dissect and publish more articles.

Dr. Cox’s Doctoral Process

Prior to pursuing my doctoral degree, I obtained a B.S. in mathematics and a M.S. in industrial engineering. I wanted to obtain a Ph.D. in engineering education, but no formal department of engineering education existed at the time. For this reason, I chose to pursue a Ph.D. in Leadership and Policy Studies and develop projects focused upon Engineering Education. During my first year as a Ph.D. student, I received funding to mentor a group of seven students from New York City who were members of a program designed to increase the retention of students from diverse populations. From my 2nd to 5th years of doctoral study, I received a graduate research assistantship within an on-campus Engineering Research Center (ERC). Here, I worked with assessment and evaluation experts, bioengineering, educational technologists, and learning scientists, and eventually became the Student Leadership Council Chairperson for students across four research universities. My office was not located in my department, but was in a nicer location within a new building on campus.

I completed core education courses in my department and completed three graduate courses in my cognate area, sociology. I completed my qualifying exam after two years and passed the first time I took it. No faculty in my department specialized or had interests in my research area. For this reason, I added three outside committee members to my dissertation committee in addition to three departmental committee members. Five of six committee members were full professors. Because of my involvement in the ERC, I had numerous academic mentors who represented diverse areas of expertise. One mentor was in my home department and two lead projects on my ERC research team. Working with these individuals made me comfortable working in an interdisciplinary realm.

My dissertation project developed from the three years of research that I have conducted and published in the ERC. I talked to the thrust leader of the Assessment and Evaluation team, and he helped me to align my interests with the goals of
the ERC. I ended up conducting a five-part validation tool that I used to collect classroom observation data. I presented much of my findings at the American Society for Engineering Education and co-authored an article in The Journal of Engineering Education. Participating in the ERC gave me an opportunity to interact with faculty. I enjoyed the autonomy of an academic career, and I loved creating new ideas and presenting these ideas to a larger audience.

Upon graduation I applied for one position and obtained it in the area of engineering education. Because I had a clear goal prior to entering my doctoral program, I had no apprehension about the job search and alignment of my interests with career goals. Working at an NSF Center gave me several leadership opportunities so that I could “hit the ground running” as a faculty member.

As a new faculty member, I was successful in several ways but was not prepared in other ways. During my first two years as a faculty member in a new discipline, I extended my dissertation work to new contexts and received federal funding for my projects. With these projects, I attracted several doctoral students, and my research laboratory grew quickly. This growth, however, was something for which I was not prepared, since other faculty at my institution had told me about the difficulties of receiving research funding. Another surprise for me related to variations in doctoral students’ motivations and abilities. I loved research as a doctoral student, but many of my students did not. As a result, their enthusiasm for conducting research that was important to me did not always match my expectations. Since, prior to becoming a faculty member, I had not advised students, I was not prepared for the personal and professional challenges associated with mentoring and advising. For this reason, I had to adjust my expectations and mentoring styles to accomplish the overarching goals for my research group. Even now, I am astonished at how much doctoral students depend upon their advisors for guidance.

Dr. St. Omer’s Doctoral Process

My doctoral process was unusual in a number of ways. Unlike most doctoral students, I had returned to school following approximately five years in industry. The decision to return was a function of my realization that my personal reward system was not suited to the corporate climate and of prodding from my Master’s project advisors. These advisors were a husband and wife team who had submitted my name for an institutional fellowship program. After much thought and another year of financial preparation, I arrived in the program. The initial transition was something of a struggle. My department required a qualifying exam which was based on the core sophomore courses. Exam questions were submitted by the faculty members currently teaching those courses. Although I thought I was prepared, the qualifier was a humbling experience. Clearly, I had forgotten how to take a test, and the nomenclature used for some of the questions was unfamiliar to me. Failing an exam was a new experience for me, one that had me questioning my decision to return to school. After the initial discomfort, I developed a new plan to sit in on the classes whose nomenclature I did not recognize and, I passed the exam the following semester.
Between the fellowship and my research assistantship, I was able to make the financial adjustments necessary to adequately restructure my existence. My initial research project was based on the project associated with the assistantship. However, a year into the project, I realized that it was not an area with sufficient interest to carry me through other three or four years. At that point, I spoke with my advisors about my true interests. The new plan for research incorporated the statistical process control and design of experiments experience that came from my industrial experience. My advisors agreed despite their lack of exposure to these areas. The graduate curriculum was flexible enough to allow me to complete courses in a variety of departments that supported the research. I have come to understand that this is not always possible at many institutions.

It was unfortunate that shortly after implementation of the new research plan; I developed health problems that went undiagnosed for many years. I was extremely frustrated by the lack of coverage provided by student health insurance, and I incurred significant unexpected debt. The one time I remember having a true disagreement with my primary advisor revolved around the impact of my health and my ability to complete the experiments that I proposed. As an engineer with “real world” experience, I was confident in my ability to know my limitations and to develop solutions that would allow me to continue. Convincing the faculty of this ability was more of a challenge than I expected. Further complications arose from the accelerated rise in administration of my primary advisor, a rift in the relationship between my advisors and other faculty on my committee, and the potential departure of another committee member. The navigation of these situations was based on my experience in the corporate environment. I worry that students often fall through these kinds of cracks.

I was successful in completing the work and proud of my accomplishment despite the obstacles that arose. I was pleased that I had managed to finish my degree, so journal publications were relatively low on my priority list. I began my faculty process when I was asked to stay on as a visiting faculty member in the vacuum created when my advisors changed institutions. The teaching aspect of this position was less jarring because of my prior service as a teaching assistant with complete responsibility for a lab. The service and research aspects were less defined, and I received little guidance from my department colleagues, the college, or the institution. I sought some input from the teaching and learning center, and the graduate school, but at the time, no formal orientation existed. In retrospect, it would have been helpful to understand the non-entity status of the position. My frustration led to my acceptance of a post-doctoral position at a large university where the chair of the department included me in all communications and activities with new faculty hires. I learned a great deal from that inclusiveness about the expectations of tenure-track faculty at a research university. It was also at that point in my career that I made the decision to accept a position at an institution whose engineering program focused at the baccalaureate level. Three key factors in that decision were my ongoing health concerns, the weight of expectations at such an institution, and my awareness that I was already at least ten years older than most assistant professors. Shortly before departing for my new tenure-track position, my health condition was finally identified.
In hindsight, my personal anxiety concerning the intersection of expectations and personal limitations allowed me to settle for what I thought would be closer to my personal expectations of the professoriate. I think of the university as primarily an institution of higher learning and yet, recognition of good teaching is sometimes a scarlet letter. I have since learned that department chairs and deans are critical to the success of new faculty. Although unwritten in faculty guidelines, journal publications are the measuring stick for the science, technology, engineering, and mathematics (STEM) Ph.D. As someone who conducts engineering education research in addition to discipline-specific research, I have found that not all research funding is the same. In general, those individuals from whom I learned the most about navigating the academic environment where people that I met at conferences or through personal networks.

In both industry and academia, the expectations of graduates depend on a number of skills that are not required to successfully complete a Ph.D. program. As with the National Research Council’s Engineer of 2020 evaluation, it is time to rethink the skills necessary for success for our graduate students. I was given a copy of a book entitled *The university: An owner’s manual* by Henry Rosovsky at some point in my career. In it, he describes graduate students as the intellectual children of faculty. I am struck by the irony of the analogy. Much of his discussion focused on the joy of developing minds and the rewards of faculty life. Conversely, as in today’s society, there exists too large a fraction of neglect and abuse that comes from the “sink or swim” mentality. The 2007 Council of Graduate Schools report Graduate Education: The Backbone of American Competitiveness and Innovation contains a number of recommendations on increasing interest in STEM graduate education, reducing attrition, fostering global education of culture and language, and encouraging students to use “their knowledge and skills in a real-world setting to gain scholarship and experience through service to the community, the state, the nation, and the world.” Unfortunately, the structure of many of our graduate programs is narrow in scope, rigid in structure, and elite in admission. Hazing is the term that most often comes to mind.

*Common Experiences*

Common themes have emerged from the doctoral process of the authors. First, the authors desired to do something different from traditional models of doctoral education presented within their respective disciplines and departments. Because of this, they had to engage in individual and multiple mentoring experiences and networks that would help them to identify the postdoctoral paths that would complement their academic decisions. Second, the authors were not limited to their primary disciplines and to exposure of only academic experiences during their doctoral processes. These interdisciplinary exchanges allowed them to meet and to collaborate with diverse groups of researchers across multiple domains. Third, although the authors were exposed to publishing venues as graduate students, they were not prepared fully for post-graduate publishing cultures within their respective disciplines. Fourth, despite the positive impact of advisors and individuals in the lives of the authors, they still had challenges as faculty. In other words, nothing fully prepared
the authors for the experiences that they had to face as new faculty. Finally, despite
the exposure of the authors to academic and non-academic environments, they still
chose to enter academia after graduation instead of another environment.

Despite the commonalities of the authors’ experiences, there were also several
differences in the experiences of the authors. Each person began her doctoral process
after different prior experiences. As such, the perspectives they brought to
their programs affected their graduate school activities, their research, and their
subsequent career choices. The authors also had different advising experiences. These
experiences greater impacted their successes as graduate students and laid a founda-
tion for initial accomplishments as faculty.

EXPECTATIONS OF A NEW PH.D.

The reflections of the authors demonstrate the importance of diversifying the
experiences of students during their doctoral processes. Whether pursuing a career
in academia, government, business, or the non-profit sector, new Ph.D.s, particularly
those in STEM, could benefit from added exposure to teaching, professional skills,
research skills, and industry expectations. Teaching activities for a doctoral student
may include developing and managing a course, creating course learning objectives,
teaching with technology, and understanding classroom assessment. Related to class-
room assessment, Ph.D.s could learn to evaluate themselves and their students’
learning both formatively and summatively. In addition, the relationships between
teaching and mentoring could be explored. Professional skills such as communica-
tion, time management, team building, negotiation, entrepreneurship, and project
management could be primary emphases within the doctoral process. In addition
to the general research skills that are obtained by students during their doctoral
experiences, skills such as grant writing, writing for publication, lab management,
strategic planning, advising, fiscal management, and resource management could
be introduced.

Skills needed for successful careers in industry include resource and time manage-
ment, team building, leadership and communication, fiscal and lab management,
self-assessment, writing for publication, and strategic planning. For most businesses,
having a highly skilled workforce is a real source of competitive advantage in a global
economy. A company with knowledgeable and creative workers has a competitive
advantage that is often difficult to duplicate. The next generation of engineers must
be equipped to deal with unfamiliar problems in unfamiliar settings, and prepared
to work with people who come from a culture different than theirs. Preparing young
gineers to work in a flat world is no longer something that engineering schools
can leave to chance (Friedman, 2005). Schools must become proactive in providing
global experiences for engineering students. Schools can no longer promote global
experiences to those who have the time and resources to go abroad. This ideal is
compatible with the National Science Foundation’s mandate to better prepare “future
generations of U.S. scientists and engineers to gain professional experience beyond
the United States’ borders early in their careers.” The global economy demands
engineers successfully negotiate and understand different cultures.
In response to recommendations for expanded competencies for doctoral students, Table 1 was created. Current demonstrations and proposed additional demonstrations of competencies are presented in this table for the development of research, teaching, industry, and professional skills competencies. Of the four areas, research competencies are most formal and consistent across departments. Possible reasons for not including additional competencies, particularly within STEM fields, are a lack of consensus about the inclusion of teaching and professional skills training in predominately technical areas.

Table 1. Current and proposed demonstrations of doctoral competencies

<table>
<thead>
<tr>
<th>Area of competency</th>
<th>Current demonstrations of competencies</th>
<th>Additional demonstrations of competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>Research assistantship, Preliminary exam, Qualifying exam, Dissertation</td>
<td>Proposal writing, Undergraduate research mentoring and advising, Peer-reviewed publication, Research lab management (i.e., strategic planning, fiscal management, and resource management)</td>
</tr>
<tr>
<td>Teaching</td>
<td>Teaching assistantship, Course development and management, Classroom assessment, Teaching with technology, Development of pedagogical content knowledge</td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>Degree completion, Industrial internship or industry exchange, Industry portfolio, Basic project management</td>
<td></td>
</tr>
<tr>
<td>Professional Skills</td>
<td>Informal seminars or hands-on opportunities</td>
<td>Reflection of application of professional skills within research, teaching, and industrial experiences, Formal seminars in which students engage in professional skills applications</td>
</tr>
</tbody>
</table>

ALTERNATE MODELS

Nerad (2009) recommends that doctoral programs explore multiple options for the future. To ensure that doctoral students have comprehensive experiences that prepare them for academic and non-academic careers, the authors propose alternate doctoral education models which are presented in the following section. These suggestions include data tracking by departments, the use of multiple mentoring models, the development of doctoral portfolios, and the creation of teaching certificates.
CREATING COMPREHENSIVE EDUCATIONAL EXPERIENCES

Field Research Projects

The Field Research Project (FRP) would be an opportunity for doctoral students to pursue an independent, well-defined study of a topic related to their engineering disciplines. Similar to the NSF Grant Opportunities for Academic Liaison with Industry (GOALI) program (NSF, 2009), which allows students to conduct research within an industrial environment, field research projects would occur either during the academic year or during the summer. A FRP would be narrow enough for completion during the allocated time, yet broad enough to present a variety of research challenges that could not be solved solely within an academic institution. During the FRP intensive period, students will work with a faculty mentor who monitors their progress and suggests appropriate data sources (e.g., local companies and organizations, government and business offices, libraries and archives) and with individuals representing different areas of expertise within the company (e.g., technicians and managers). Via these interactions, doctoral students can gain an understanding about the relationships that occur within a company along with the resource requirements to complete projects within industrial settings. At the end of the program, students will create a portfolio and will give formal presentations within both industrial and academic settings. In this way, faculty, undergraduates, and graduate student peers can be exposed vicariously to an industrial environment.

Doctoral Student Exchanges

Although study abroad and college exchange experiences are common within undergraduate education, they are not encouraged as much within doctoral education. Doctoral students, however, can engage in such experiences to become familiar with the research and teaching environments of institutions with diverse missions. For example, a doctoral student at a research intensive university interested in working as a faculty member at a predominately teaching university might spend a semester as an apprentice student teacher at a minority-serving institution or at a liberal arts college. On the other hand, a student who wants to be a researcher at a research intensive university can spend a semester conducting research at a comparable university and can co-mentor students in the lab of a senior researcher. Through this experience, a student can examine the realities of working with students at various stages of their educational careers, can understand how to develop and to manage a research program, can teach an undergraduate class or lab session, can attend a faculty or departmental meeting, or can participate in a summer research project under a mentor/advisor who is a faculty member at the participating institution. The exact nature and frequency of the visits would be determined by students, their advisors, and participating institutions.

Annual Symposium

A Symposium for doctoral students and faculty advisors from multiple institutions could be held annually so that students and faculty can share ideas about the most effective doctoral education practices. The Symposium will create opportunities for community building and continual professional development for doctoral students.
Included will be workshops and seminars on graduate school issues and strategies; technical engineering design sessions, discussion groups on community building within and among doctoral students; faculty mentor training. Also, students and faculty may form Virtual Communities across participating institutions. This Virtual Community might also support group-to-group interactions such as large-scale distributed meetings, collaborative work sessions, seminars, lectures, tutorials, and training. Symposium host sites could rotate among interested institutions.

Doctoral Learning Communities

Cohorts of doctoral students would be involved in learning communities at their doctoral institutions. Students could create social networks to foster regular social interactions among the doctoral students throughout their doctoral experiences and beyond. In addition, students could engage in brown bag and research seminars. Ultimately, learning communities would be supportive settings that allow students to identify themselves as scholars and to form relationships within their respective fields. Interdisciplinary learning communities could also help students to connect with faculty, to interact with peers, and to form study groups that will help student realize their academic goals and form a helpful network of peers.

Data Tracking

Enrenberg et al. (2009) recommend that departments collect data about students throughout their doctoral process. Millett and Nettles (2009) further identify three metrics for students’ success in doctoral education—(1) students’ rate of progress, (2) their degree completion, and (3) their time to degree. Information about students’ characteristics, their progress in the program, and their post-graduate activities could also be obtained. By collecting data at several points within a program and following up with students about the information that they provide, an advisor or a graduate committee can give formative feedback to students about their progress before they enter their postdoctoral careers. They can also increase the completion rates of students and identify the activities that are most likely to benefit diverse groups of students.

Multiple Mentoring Models

Research indicates that retention of students increases as they experience quality mentoring primarily during the first year of graduate school. At the earlier stages of the academic pipeline, networking, mentoring and exposure to career opportunities are important to success in graduate studies and as faculty vying for tenure (Aspray & Bernat, 2000). Rather than working with one mentor, students may engage in a multiple apprenticeship model. Golde, Bueschel, Jones, and Walker (2009) identify four features of such a model for doctoral students. Features of this model include intentional pedagogy, multiple relationships, collective responsibility, and relationships characterized by respect, trust, and reciprocity. By including additional mentors in the lives of doctoral students, they may be exposed to skills outside of a traditional classroom environment.
CREATING COMPREHENSIVE EDUCATIONAL EXPERIENCES

Doctoral programs can provide training for faculty members on how to develop and to sustain mentoring relationships with doctoral students and could develop peer mentoring programs for students across multiple engineering programs. The doctoral peer mentoring relationships would foster a network of support for students, would aid in the academic, emotional and socio-cultural adjustments of students, and would provide advice and support and for students.

Portfolio Development

To demonstrate multiple competencies, doctoral students can submit a comprehensive portfolio that represents research, teaching, professional skills, and industry proficiency. Although the dissertation can be a primary component of this portfolio, additional elements may include course development materials, a description of an industry project, and application of professional skills within a variety of contexts. This portfolio could be electronic and be used within an interview to demonstrate students’ acquisitions of multiple skills.

Teaching Certificate

In addition to the dissertation, colleges can require students to obtain teaching certificates. The course that students take to obtain the certificate would introduce students to common pedagogical practices and assessment techniques. To obtain the certificate, students would have to design their own course and implement concepts introduced within the college-level course. They would receive formative feedback via senior instructors who have been identified as effective teachers and would be evaluated summatively by their students.

CONCLUSIONS

Both anecdotal and empirical findings confirm that the experiences of doctoral students differ greatly. Much of the success of these students depends upon informal and formal connections to network during their doctoral experiences. Additional competencies within doctoral education, particularly for STEM students, are needed to more comprehensively prepare Ph.D.s for academic and non-academic careers. These competencies relate to formal assessments of students’ engagement with teaching, industry, and professional skills. Additional ways to engage students in diverse experiences include the formalization of teaching certificate programs and mentoring, the creation of comprehensive portfolios, and the formation of doctoral learning communities and institutional exchanges.

REFERENCES


CREATING COMPREHENSIVE EDUCATIONAL EXPERIENCES


CONTRIBUTORS

Monica F. Cox is Assistant Professor of Engineering Education at Purdue University.
Stephanie G. Adams is Associate Professor for Mechanical Engineering at Virginia Commonwealth University.
Ingrid St. Omer is Assistant Professor of Electrical Engineering at the University of Kentucky.
2. THE INTENSIFICATION OF THE PROFESSORIATE

Pedagogical Casualties in an Era of “Prestige-Seeking Universities”

THE NATURE OF WORK IN THE ACADEMY

According to the National Study of Postsecondary Faculty (NSOPF), university professors work long hours. In their 1998 survey, the majority of faculty reported that they worked over fifty hours a week (54.8% for males, 52.8% for females). This average is more than ten hours greater than the non-academic workers in the United States at the time. Jacobs (2004) notes that professors began working longer hours in the 1990s with the rise in public criticism regarding the actual hours professors spent in classrooms. Further, many universities began to increase their level of expectations for faculty research. Technology has also drastically altered the nature and amount of work professors do on a weekly basis. E-mail has become such an integral part of a professor’s work that it has drastically increased the amount of time that professors work from home.

While a fifty-hour workweek is average in the professoriate, a number of professors responded that they work more than sixty hours a week. Longer hours are more often the case for professors who work in research institutions and particularly those who have not yet achieved tenure. Further, academic couples often put in more hours than other academics. While most academic couples noted that their combined work equalled more than eighty hours a week, 17% of the male professors and 25% of the female professors who were part of an academic couple indicated that they and their spouses worked more than 100 hours a week combined.

Regardless of whether a professor spends forty, fifty, or sixty hours a week working, survey results indicate that they often feel that they do not have enough time to do their work. In particular, professors noted that they did not have enough time to stay current within their fields (Jacobs, 2004). Professors feel that they are not getting enough done professionally often indicate that they are not satisfied in their jobs. Additional analysis of the survey data indicated that faculty who felt much of their time was spend on institutional demands rather than personal or professional choices were often dissatisfied with their jobs and, in particular, their workloads. In contrast, professors who spent more time on their research were less likely to complain about their workloads because they typically indicated that their research gave them professional satisfaction (Jacobs & Winslow, 2004).

Further, the heightened demands for service and the degree to which the changing work of the professoriate reduces professional autonomy weighs heavily on faculty.
For example, professors involved in professional development school partnerships often feel as if they are forced into working with individuals who do not share their vision for teacher preparation and who have no interest in the aims of the partnership. In addition to engaging in challenging collaboration without any sense of collegiality among partners, these professors are adding a tremendous amount of service to their workload without any real compensation in terms of promotion and tenure. In essence, the majority of their “work” is not honored within the partner schools or within their universities in terms of the reward system. In one particular study, the spouses of professors who were involved in a professional development school noted that their spouses were highly stressed because of their workloads, they had less time to spend with their families, and were frustrated over the personal sacrifices they had to make for the sake of their university service (Bullough, Birrell, Young, Clark, Erickson, Earle, Campbell, Hansen, and Egan 1999).

Work in professional development schools is just one example of sources of intensification, and there are a number of other external factors that influence the nature of work for professors and possibly result in the following: reacting to external mandates for accreditation or certification, establishing and sustaining superficial relationships with liaisons or districts, chasing grant money or providing services as a result of earned grants. Often these service requirements have little or nothing to do with a professor’s research agenda, fragment the professor’s time and energy, and otherwise disrupt his or her professional trajectory. In particular, professors in the service-heavy disciplines such as teacher education and educational leadership are highly susceptible to these sources of extensive service given the degree to which they must supervise in the field and develop close ties with schools and districts.

Although difficult to measure, the feeling of guilt inherent within scholarship plays a part in the lives of many professors – particularly those facing increased demands to publish. Even when course loads are reduced to support scholarship, professors do not necessarily stop thinking about their work and what is left to be done when they leave their offices or attempt to engage in their personal lives. In essence, guilt is an inherent part of the daily lives of many professors even after they literally or figuratively leave their offices at the end of the day or the week. Professorial tasks blur the boundaries between work and home to the degree that professors often feel that they are constantly working. They may be thinking about a manuscript as they prepare dinner, put children to bed, or otherwise go out and try to relax. This tendency, while not officially added to the formal hours of the work week, certainly plays a critical role in the level of stress a professor may feel – particularly if that professor is frustrated that he or she cannot finish that specific project because of other unrelated but nevertheless necessary tasks.

THE PROFESSOR IN THE “PRESTIGE-SEEKING UNIVERSITY”

While the work load at most universities has increased in recent years, the work load of professors in what Brewer, Gates, and Goldman (2002) classify as “prestige seeking universities” has become even more significant because these universities are attempting to compete with flagship universities that have historically maintained far greater support structures through which they have achieved their rankings.
According to the authors, prestige-seeking (PS) universities do not define their goals in terms of what they do or whom they serve. Instead, they define their goals in terms of what others are doing better than them as measured by the various rankings. Brewer, Gates, and Goldman (2002) note, “In spite of the perceived deficiencies in existing measures, the PS types are fixated on these relative measures of excellence and prestige” (p. 42).

The authors continue by noting that prestige-seeking universities compare themselves to other institutions on almost every dimension for which data can be found. Because they do not currently have prestige within any aspect of their operation, none of their programs are sacred. All programs in a prestige-seeking university are at risk of dissolution if such an act would provide support for areas in which the institution is more likely to achieve prestige. Because the aims of a prestige-seeking university are based on value-less indicators such as indiscriminate rankings, it does not matter whether a particular program is consistent with any larger ideal. Prestige and prestige-seeking universities have no common benchmarks, so leaders within the institutions set goals and make significant operational decisions based upon those goals in order to imitate and/or become better than comparative institutions.

Prestige is achieved within universities according to three routes: student quality, research, and sports. As such, the Research II (or research intensive) institutions are the most vulnerable to this organizational phenomenon. These universities have the capacity to increase their standings in all three areas, but they are often expected to do so without the organizational support and resources historically afforded to Research I (or research extensive) institutions. Because these institutions are often trying to be as good as or better than their research extensive counterparts, their professors are often judged according to higher standards for research and scholarship in spite of the fact that they do not have the same institutional support as those for whom they are being compared. Further, the doctoral students at research-intensive institutions are often practitioners who have no intention of pursuing careers in the academy. As such, they are less likely to be full-time students offering research support and also less likely to seek out publishing opportunities with their advisors.

Because prestige is based upon how one compares to others, the distinction is, at some level, always a moving target. Thus, most institutions that value prestige find themselves constantly competing for it. For institutions that are new to this game, a large focus of their energy may be directed toward seeking prestige, and their efforts can appear schizophrenic as the rankings for which they are competing change. In contrast, the authors note some institutions eschew the various rankings and focus on their reputations. Reputation-oriented universities focus their efforts on the needs and interests of their constituents. Further, they judge their progress according to the satisfaction and success of their graduates. According to the authors, reputation-oriented universities are more student-centered, dynamic, and responsive to change. In contrast, prestige-seeking universities see their students as valuable only to the degree that they can bring greater prestige to the university. In other words, while universities oriented toward strong reputations see themselves serving their students, universities seeking prestige see their students serving them. By organizational necessity, this mindset often trickles down to the relationships professors have with students.
Since Michael Apple first introduced his intensification thesis in 1986, a number of scholars have examined the phenomena of intensification of work for teachers in K-12 settings (Acker, 1999; Apple and Jungck, 1996; Ballet, Kelchtermans, and Loughran, 2006; Campbell and Neill, 1994; Easthope and Easthope, 2000; Hargreaves, 1992, 1994; Helsby, 1999; Troman, 1996; Troman and Woods, 2001; Woods, 1999). According to Apple and these other scholars, the nature of work in schools has changed to such a degree that teachers – in their efforts to keep up with ever-increasing demands – have become deskillled and deprofessionalized. As Apple (1986) and others have noted, intensification does not merely imply more work. It also involves a separation between one’s work and the meaning behind it. Organizational structures and institutional cultures, when intensified, promote a technical way of being for teachers.

This chapter extends the work regarding intensification to explore the nature of this organizational phenomenon within universities and to specifically examine the effects this intensification has on how professors advise their doctoral students in prestige-seeking universities. A number of parallels can be drawn between the intensification as it has been identified at the K-12 setting and the intensification found within universities, and while this intensified environment affects all aspects of a professor’s work, the critical work of advising becomes particularly susceptible.

**Effects on Teaching**

First, like K-12 teachers, professors have less reflective time to think about their teaching and scholarship. When thinking becomes a luxury within the academy, professors are not the only ones who suffer. Students suffer because the professors do not teach as well. If professors do not have time to reflect about their teaching, they do not have time to explore new materials for courses, to develop more meaningful assignments, or to otherwise consider different ways to approach the subject of the course. As a result, they are less likely to modify courses between semesters based upon self-assessment or student evaluations. Akerlind (2005) concurs. When professors are focused on navigating heavy workloads, their aims deal more with efficiency than with becoming better teachers.

Since teaching is, in essence, the first and most critical stage of advising students, the degree to which intensification compromises a professor’s teaching likewise compromises the relationships the professor has with his or her advisees. More than in the limited one-on-one advising a professor and advisee may have between or after coursework, the time a professor spends with his or her advisees within the university classroom provides the critical foundations that lead to professional growth. During classes a professor provides the ideological foundations of the field and establishes expectations for thinking, writing, engaging, and otherwise behaving as scholars in a scholarly community. In an intensified environment, professors do not fully utilize the time they have with their advisees to help them develop as scholars, and they do not model appropriate pedagogy for students to looking forward to teaching in the academy themselves.
Effects on Research and Scholarship

As noted by Apple (1986) and others, intensification leads to a disconnection between one’s work and one’s sense of purpose. Therefore, professors within an intensified academic environment are highly susceptible to losing a sense of their scholarly identities and may struggle to sustain a generative trajectory of research and scholarship (Ackerlind, 2005). This becomes professionally and pedagogically problematic regardless of the research status of the university given the reciprocal nature of teaching and scholarship, but it becomes particularly disastrous in settings where professors are working with doctoral students. Particularly given the previous description of doctoral granting, research intensive institutions where professors are expected to publish more without adequate support, intensification creates a circuitous problem. Professors chase quick and superficial publications to meet institutional requirements for their promotion and tenure, and they do so at the expense of genuine intellectual growth and meaningful contributions to their fields. Over time, chasing superficial publications begets further chasing of superficial publications because the professor has not established a coherent, meaningful, and potentially expansive scholarly identity. Without meaningful connections between the “work” of publishing and one’s professional identity, the disconnection between purpose and work characteristic of an intensified organizational environment – particularly that of a prestige-seeking environment - becomes even more acute. Often in these circumstances, professors stop writing once they reach a professional plateau (Ballet, Kelchtermans, & Loughran, 2006), and yet they continue to advise doctoral students for the remainder of their careers.

Professors who do not develop or otherwise disengage from a trajectory of research and scholarship may experience what Clance (1985) characterizes as the “imposter syndrome.” According to Clance, faculty experiencing the imposter syndrome do not feel as capable or adequate as others. They may have self-doubt, lack of direction, feelings of helplessness, and strained relations with others, including their students (Brems, et al., 1994; Clance and O’Toole, 1988; Gottdiener, 1982; Topping and Kimmel, 1985). According to research, professors struggling with the imposter syndrome are ineffective instructors and mentors. They are more likely to confuse students, less likely to be open to questions, and too insecure to promote enthusiasm about a subject (Bardwick, 1986; Baldwin, 1990; Brems et al., 1994).

The imposter syndrome and its subsequent effects can have serious implications within a university classroom, but those effects are, at least to some degree, mitigated by the fact that a classroom has motivated and thoughtful students and common texts from which to explore ideas. In other words, students in a graduate class are likely to learn and grow even if their professor is incompetent. They will make comments to each other, challenge each other’s thinking, and guide each other through the materials if necessary. While the experience will not be as educative as it may be with a highly skilled professor, there is, nevertheless, potential for growth based upon students’ shared readings, interests, and goals.

The imposter syndrome has far more significant consequences within advising relationships. Once students complete their coursework and begin to engage in dissertation work, they are very much at the mercy of their advisors. While students have
hopefully achieved levels of intellectual independence about their topics and have
developed the capacity to identify appropriate research regarding their topics, they
must nevertheless please their advisors throughout the process of writing their dis-
sertations. Professors experiencing the imposter syndrome may lack the background
knowledge to provide appropriate guidance – particularly when a student’s topic
does not directly relate to his or her own research. This scenario is more likely
to occur within intensified work environments of prestige-seeking universities
where professors often have much larger advising loads of students who are more
practitioner-based and therefore more interested in pursuing dissertation topics
more closely related to their own work than that of their advisors.

Effects on Institutional Service

Further, if professors do not have time to think, they also do not have time to think
about the policies, procedures, and general operations of their own institution. Like
K-12 teachers, they are more inclined to accept directives from university adminis-
tration without question. By staying busy with the busy work, professors cannot
change the conditions that have created the busy work in the first place. Therefore,
their intensification creates an organizational circuit of bad practices. This becomes
even more likely when one considers research by Houston, Meyer, and Paewai (2006)
that indicates that professors are less likely to apply what they know to their own
circumstances. For example, professors of educational leadership are not likely to
apply concepts from organizational theory to analyze their own university, college,
or department to improve operations.

While much of the intensification K-12 teachers in the United States are
experiencing is a result of the No Child Left Behind (NCLB) legislation and its
ensuing requirements for documentation, assessment, etc., professors are hit from a
number of sources both within their own institutions as well as from state certification
boards, accreditation agencies, and external funding sources. For example, some
programs are faced with program revisions based upon state certification changes.
Other programs are faced with greater needs to document student performance and
program evaluations for the sake of accreditation. In many instances, tenure-line
faculty are being replaced with temporary and part-time clinical faculty (Anderson,
2002; Baldwin & Chronister, 2001; Conley, Lesley, and Zimbler, 2002; Ehrenberg,
2004; Ehrenberg & Zhang, 2004), and as a result faculty are increasing their advising
and teaching loads and taking on greater and greater amounts of university service
because many of those tasks are relegated to tenure-line faculty only. This dynamic
becomes even more problematic in departments where there is a significant disparity
between the number of tenured faculty and those seeking tenure because some
committee work is relegated only to tenured faculty (e.g. tenure and promotion
committees) and otherwise tenured professors often try to shield tenure-seeking
professors from too much service. Further, and particularly in challenging economic
times, a number of faculty are feeling a great deal of pressure to pursue grant funding
to supplement their research, scholarship, and travel. Often these grants involve
even more service to external agencies and school districts.
THE INTENSIFICATION OF THE PROFESSORIATE

ORGANIZATIONAL STRUCTURES WITHIN UNIVERSITIES AND IMPLICATIONS FOR INTENSIFICATION

The intersection of intensification and seeking prestige found in many universities today is particularly problematic given the organizational structure of universities. For the most part, universities have been described as loosely coupled organizational silos (Davis and Bedrow, 2008; Moore & Sampson, 2008) with ambiguous purposes (Lutz and Lutz, 1988). The structure of universities – particularly university departments and programs – are coupled loosely according to limited core curricular requirements, technical procedures, some level of authority as manifested within university administration and accreditation agencies (Orton and Weick, 2000). Otherwise, their identities and operations are relatively autonomous. Thus, university programs are typically decentralized and operate according to their own policies and procedures as long as those policies and procedures are consistent with those of the larger university and accrediting agencies. Loose couplings offer some advantages within the university structure. They provide opportunities for localized adaptation and novel solutions. Further, if a particular program struggles or suffers some level of breakdown, it is not likely to affect others. However, these advantages can also be seen as disadvantages, particularly in light of the prestige-seeking status of an institution. Because programs are loosely coupled, one program’s success and growth does not necessarily lead to success and growth in others. As Weick (1976) notes,

> If a local set of elements can adapt to local idiosyncrasies without involving the whole system, then this same loose coupling could also forestall the spread of advantageous mutations that exist somewhere in the system. While the system may contain novel solutions for new problems of adaptation, the very structure that allows these mutations to flourish may prevent their diffusion (p. 7).

Further, because programs are loosely coupled, if a university chose to eliminate one it would not necessarily affect the others. Therefore, if a university was seeking prestige by proving support and encouraging innovation in one program, it would, by virtue of the organizational structure, be able to do so at the expense of other programs.

The larger organizational structure of universities often makes professors more susceptible to intensification. In addition to operating in relatively independent academic silos, professors and their programs are subject to a central source of surveillance and power: the president and provost at the university level, the dean at the college level, and the department chair at the departmental level. In this manner, the organizational structure of the university resembles a panopticon (Foucault, 1975). The highest levels of administration for each unit of operation are the only ones who see the distribution of work in the university and allocate resources for that work.

The panoptic nature of the organization is most keenly felt at the departmental level because it is the department chair who has the greatest influence on the work and support of professors. More often than not, the department chair is the only one who “sees” the workload of each professor and the degree to which each professor
gets support for that work is often negotiated between the professor and the department chair without being made public among the others in the department. Further, the department chair is often the only one who evaluates the professors, and so no one else can judge the degree of equity regarding workload, support, and performance. When professors do not “see” the bigger picture within the department, then they are not necessarily able to judge the situation and attempt to improve conditions. Instead, they are more likely to fall into a culture of blame (Doring, 2002; Houston, Meyer, Paewai, 2006).

Faculty are, to some degree, subdued within this panoptic system by an over-exaggerated sense of academic freedom. The loose coupling of programs, the de jure faculty governance found at most institutions, and the limited formalization of procedures within the academy implies a greater degree of freedom than actually exists for many – particularly those in an intensified environment. In other words, one is free in the academy to the degree that he or she has the resources to be free. However, strained resources, increased teaching loads, and extensive advisee loads make the “freedom” more of an ideal image than a reality.

The limited formalization within universities is more often than not coercive – predicated upon surveillance tactics needed for the sake of accreditation. With this in mind, universities can be characterized as autocratic organizations with low degrees of coercive formalization as described by Adler and Borys’ (1996) typology of organizations. According to Adler and Borys (1996) an organization is formalized to the degree that it operates under rules explicitly governing behavior with very prescribed roles and relationships among participants. Lutz and Lutz (1988) argued that there is not enough formalization within universities. Not only is there often ambiguity of purpose overall within the university, but there is also a great deal of ambiguity regarding the roles and responsibilities of professors. Where formalization does exist within the university, it is more coercive. The aspects of a professor’s work that are dictated are typically done so for the sake of surveillance (thus reinforcing the panoptic nature of the organization) in order to document performance for various agencies. Regardless of any framework a college may produce for NCATE and others, most of the prescribed expectations of professors are not connected to any larger purpose. Therefore, the data collection processes become discrete, technical tasks to be endured and additional sources of intensification.

While some may tout the lack of formalization in university structures as a lack of bureaucracy and therefore inherently good, less formalization within intensified and prestige-seeking universities is actual very troubling – particularly in relation to advising between professors and advisees. Professors need enabling structures and procedures in order to free themselves to work more effectively with their students. Otherwise, they become overwhelmed by the disconnected tasks required within their institutions and compromise their relationships as mentors and teachers. When professors find themselves with unmanageable workloads and large advising loads, then the ambiguity found within their autocratic programmatic silos provides enough flexibility for them to fail in multiple ways, and when their departments are structured panoptically, it provides opportunity for the powers above to blame them for those failures.
THE NATURE OF THE PROFESSORIATE AND IMPLICATIONS FOR INTENSIFICATION

In addition to the organizational structure of a university not providing support for the professor in the intensified and prestige-seeking university, the general nature of the professoriate and how it is perceived in terms of human resources within the organization makes advising even more challenging. Universities are not typically designed to support professors' academic growth and development (Akerlind, 2005). While a number of professional development centers emerged in universities in the 1970's, they have largely focused on the technical aspects of teaching such as instructional strategies and use of technology. Some universities have also offered professional development regarding grant writing, but again, this training has focused on the technical aspects of writing, not on the development of ideas or the relationship between the grant and one's research agenda (Foster & Roe, 1979; Thompson, Pearson, Akerlind, Hooper, and Mazur, 2001). Further, academic professional development is idiosyncratic and often tied to the professor's institutional circumstances. As such, universities lack an integrative framework within which they can address the variety of needs and opportunities. With little or no organizational space to consider academic growth, no formal institutional mechanisms to support it, and with the intensified university environment, many professors focus their professional goals on more efficient performance rather than academic growth. This organizational blind spot short-changes the professors, their students, and their respective academic fields and compromises their potential vitality.

According to Baldwin (1990), faculty vitality involves an instructor's capacity to challenge himself or herself as well as his or her students to strive for effectiveness in multiple ways. A vital professor has confidence and prowess to help students to develop in a positive yet rigorous manner. Further, a vital professor is enthusiastic, caring, and dedicated. As such, vitality is a critical element in the advising relationship and has positively influenced the degree to which students are able to complete their programs (Bardwick, 1986; Neumann, Finay-Neumann, & Reichel, 1990). As Brems, Baldwin, Davis, and Namyniu (1994) note, “instructors whose selves are well developed are vital and willing to be available for student contact, the two very features that have been identified as important to students' academic success” (p. 184). Their study noted that advisors exhibiting high levels of vitality were more likely to take on more advisees and were more successful with those advisees. However, faculty vitality is not innate. It requires professional support and development (Kohut, 1984).

Faculty vitality cannot be sustained in highly intensified environments where professors are overwhelmed with work that is disconnected from scholarly trajectories. When professors are burdened with heavy advising loads on top of heavy teaching and service – a scenario all too familiar in prestige seeking, research-intensive universities – their scholarship suffers as does their capacity to advise. When advisees are largely practitioners and want to pursue a wide range of research topics for their dissertations, then their advisors are highly susceptible to the “imposter syndrome” and they are forced to hold together their professional reputations in the process much like an individual drowning in debt tries to stay financially afloat.
The professors overwhelmed with work and struggling with feeling like imposters toward their advisees often suffer in isolation. Colleagues in the various loosely couple silos within their departments are typically unaware of their plight because the organizational structure prevents them from seeing beyond their own programs. The department chair sees the problem, but he or she may choose to ignore it knowing that the success or failure of one professor or one program, by virtue of loosely coupled silos, will have little to no effect on the others. Further, if the chair attends to the struggling professor or program, he or she may unwittingly admit to some level of responsibility for creating the conditions that led to the situation in the first place. Further, the dean will not necessarily reward the department chair if he or she supports the struggling professors because that support will not influence the college’s desired rankings. Ultimately, the struggling professors and their advisees become the casualties hidden in the midst of superficial institutional celebrations of advancing in rankings on U.S. News and World Report.

REFERENCES

Apple, M. W., & Jungck, S. (1996). You don’t have to be a teacher to teach this unit: Teaching, technology and control in the classroom. In A. Hargreaves & M. G. Fullan (Eds.), Understanding teacher development (pp. 20–42). London: Cassell.


**CONTRIBUTOR**

Donna Adair Breault is Professor of Education at Northern Kentucky University.