

**Midwestern Association
of Graduate Schools**

BACK TO BASICS:

Why Graduate Education



60th Annual Meeting

St. Louis
Mariott Pavilion Downtown
St. Louis, MO

April 13-16, 2004

**Proceedings of the
60th Annual Meeting
Midwestern Association of Graduate Schools**

**Back to Basics:
Why Graduate Education?**

**St. Louis Marriott Pavilion Downtown
St. Louis, MO
April 13 – 16, 2004**

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2003 – 2004**

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Harry J. Berman, Ph.D.
Chair, Publications Committee (2004 – 2005)
Associate Vice Chancellor for Graduate Education and Research
University of Illinois at Springfield

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Graduate Education: Making it Purposeful, Assessable, and Transparent

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Abstract

Graduate programs leading to the Ph.D. degree are discussed. Areas of focus for improving current programs are briefly outlined. The concept of developing a “steward of the discipline” is suggested as a goal for Ph.D. programs. We argue that exemplary Ph.D. programs foster intellectual communities and are purposeful, assessable, reflective and transparent (PART). These ideas form the basis for the Carnegie Initiative on the Doctorate (CID) which is discussed in some detail.

Graduate Education: Making it Purposeful, Assessable, and Transparent

The American Doctor of Philosophy degree (Ph.D.) continues to be highly regarded both domestically and internationally. The Ph.D. is required for most post-secondary academic teaching and research positions. Indeed, Ph.D. recipients continue to have outstanding careers as leaders in education and research worldwide. Perhaps more importantly, Ph.D.s comprise the faculty at public and private research institutions and therefore have the opportunity, responsibility, and privilege of educating not only the future professorate in all types of institutions, but also the scholars who will be leaders in the government and private sectors in both pure and applied areas of their respective disciplines. The habits of mind and perspective of our doctoral recipients have a high probability of being transmitted through generations of future intellectual leaders in our global society. We (the Ph.D.s) influence significantly the attitudes toward our disciplines of non-specialists who take our undergraduate courses. Thus the stakes are very high for developing and maintaining outstanding Ph.D. programs.

Is there any evidence that there is a crisis associated with our doctorate programs? Is there some sight of the gallows that could clear the mind? It is difficult to argue that there is clear cut evidence that doctoral programs are in mortal danger. On the other hand, by the time we see the gallows our hands may be tied. Thus, in the future, we may not be able to make the changes in programs that might have been possible if we had developed the habits of mind to continually, *critically* evaluate our doctoral programs (as we do our scholarly research programs).

Certainly there are “stressed canaries in the mine” that should at least heighten interest in carefully evaluating the current approach to doctoral education. Some examples are

- a. Attrition rates
- b. Increased time to degree
- c. Mismatch between faculty/graduate student aspirations for Ph.D. recipients and job opportunities
- d. A sense of isolation among graduate students (lack of intellectual community)
- e. Underachievement in some disciplines with regard to ethnic and gender diversity of Ph.D. graduates
- f. Lack of transparency about graduate programs from the graduate student perspective
- g. Lost opportunities for interdisciplinary research
- h. Loss of the passion for the field that originally motivated the choice of enrolling in a Ph.D. program
- i. Perceived lack of a sense of responsibility to the commons by scholars
- j. Lack of attention to the pedagogy of research

For illustrative purposes let me focus on one area – attrition rates. An attrition rate of one third in our graduate Ph.D. program is not uncommon. Such a rate would be totally unacceptable in law/medical school and in these areas might be interpreted as an inappropriate and costly approach to preparation for the guild. The consequences for scholars may be even more serious than raw attrition rates suggest. A person can be permanently handicapped or chronically infected by a disease and still not die from it. How many people do not drop out but graduate – and yet are adversely impacted (for the duration of their scholarly life) by the same factors that cause others to leave a Ph.D. program? Do departments with Ph.D. programs that have substantial attrition rates feel satisfied with the status quo (assuming they really know what their attrition rates are)? Probably not, but these attrition rates have been tolerated for decades. There are many possible reasons for Ph.D. drop-out rates, some more defensible than others. But until departments have carefully studied the situation using the same standards of evidence and critical thinking commonly applied in disciplinary research, it will be difficult to motivate changes that could lower attrition rates.

Before turning to one approach to help departments critically evaluate their graduate programs, I would like to make some general remarks about the purpose of a Ph.D. education. Whether or not graduate programs do an outstanding job of preparing people to be researchers (and I think we at least do a reasonable job in this arena) we certainly *concentrate* on developing researchers.

It is quite natural that Ph.D. programs focus overwhelmingly on preparing students to perform in the arena of research. The Ph.D. after all is a research degree. Related, but not quite the same, is the fact that the highest salaries as well as the lion's share of publicity, mobility, and esteem go to those who “hit a home run” in research. Continuing the baseball metaphor, some might ask, isn't there time enough later when

one can no longer “perform by hitting a home run” to pick up the skills that would create a coach, director of player personnel, umpire, or an effective representative of the performance area to the fans – the ones who actually pay for the infrastructure and for the salaries that sustain the performers? My answer is definitely NO.

Laying aside the importance to society of the broad application of scholarship, the need for the strong financial support of citizens for disciplinary efforts, the importance to society and the discipline of gender and ethnic diversity, and the need for a well educated general workforce, there is the simple fact that the young scholar often *immediately* begins to become a coach (teacher) or mentor (Ph.D. thesis advisor), director of player personnel (head of a research team), and umpire (referee for Federal or foundation grants), etc. The ability to function well in these diverse areas while still being an active research performer requires more than just focusing on the disciplinary aspect of the scholarly area. It also requires the developmental experiences that result from being exposed to a broad range of activities while still in graduate school.

Interest in providing a broader and more responsive educational experience¹ in graduate school is not new, and specific initiatives have been undertaken in the past few years. Professional societies, federal and private funding agencies, individual departments, and leading scholars have all noted areas of concern. Funding agencies have, in many cases, provided resources for initiatives that seek to provide opportunities to develop enrichment programs in mathematics and science as well as other scholarly areas. Some important recent examples include the Integrative Graduate Education and Research Traineeship (IGERT) and Vertical Integration of Research and Education in Mathematical Sciences (VIGRE) programs at the National Science Foundation (NSF); the Preparing Future Faculty (PFF) program originally funded by Pew Charitable Trusts and more recently by the NSF and administered by the Council of Graduate Schools and AAC&U, and later in cooperation with the appropriate professional societies; Woodrow Wilson National Fellowship Foundation’s *Responsive Ph.D.*; the *Carnegie Initiative on the Doctorate* funded by Atlantic Philanthropies and the Carnegie Foundation; and *Re-envisioning the Ph.D.* funded by the Pew Charitable Trusts. The Committee on Science, Engineering and Public Policy (COSEPUP) report of the National Academies acted as an important stimulus for several of these projects.

The encouraging news is that although each of the projects may have had a slightly different set of focus areas – improvement of teaching, diversity in the profession and pipeline issues, professional training to effectively function in a variety of settings, time to degree, improvements of mentoring, decreasing the mismatch between job expectations and reality – they all have such overlap when it comes down to what needs to happen at the department level that a real synergism has begun to occur because of the various initiatives. In fact, the particular project that I will describe below, the Carnegie Initiative on the Doctorate (CID), owes a huge debt to the work and co-

¹A useful resource for learning about recent efforts is the book by Donald H. Wulff, Ann E. Austin and Associates, *Paths to the Professoriate: Strategies for Enriching the Preparation of Future Faculty* (San Francisco, CA: Jossey-Bass, 2004).

operation of the leadership of many ongoing or past initiatives, particularly those mentioned above.

Before describing the CID and how it proposes to invigorate the Ph.D. degree by engaging selected departments to reflect on their current Ph.D. program and then to act to improve it, a few introductory remarks may be helpful. First, as asserted earlier, the Ph.D. education our graduates are receiving is highly respected in many areas. Our Ph.D. programs attract and graduate many extremely talented scholars from throughout the world. These graduates have, for decades, become the world leaders in their fields, making truly outstanding contributions to the explosion of new knowledge that has been generated by academic, private sector, and government institutions. They have also effectively educated succeeding generations of scholars. Some international students have returned home and become leaders in diverse sectors of their country. Others have remained and become invaluable contributors to our society. The general economy, lifestyle, and security of our nation's citizens has benefited enormously from the application of discoveries by Ph.D. scholars. However, opportunities and expectations change, and by ignoring evolving aspects of disciplinary areas, we may be unintentionally acting irresponsibly. The opportunities for meaningful careers in a broader spectrum of settings have arisen; the importance of gender and racial diversity has increased from both an intellectual and social perspective; the preparation, attitudes, and expectations of graduate students and society in general may have changed. The importance of technical, communication, and collaboration skills have increased at a time when students are very unevenly prepared in these areas. More generally, the need for a sense of shared responsibility to society and the associated ethical framework in the discipline may not be getting the purposeful attention required during the formative years of the next generation of scholars.

In order to promote a healthier balance of the professional and disciplinary aspects of a scholar's development, the efforts and support are required of the senior scholars in the field, respected departments, the professional societies and the funding agencies. In the academy a major focus of the change is the local program or department. Based on this assumption, the Carnegie Foundation for the Advancement of Teaching has initiated a cooperative program with 84 departments. We believe that this initiative has considerable promise to promote a greater sense of responsibility to the discipline and society – in other words, a sense of professional stewardship.

A foundational component of the CID is to identify and elucidate the desired characteristics of a mature scholar in a field. We believe such a person, a "steward of the discipline," should 1) have the ability to generate new knowledge and critically evaluate new knowledge claims; 2) critically conserve (or discard) previous obtained knowledge; and 3) effectively transform existing knowledge and its benefits responsibly to others through effective application, teaching, and writing. We believe an effective educational program for developing the appropriate experiences, skills, and habits of mind is most likely to occur in departments that have explicit goals for producing stewards of the discipline. That is, they should be quite *purposeful* in this arena. We believe the contributions of each part of the program (recruiting, orientation, mentoring, curriculum, high stakes testing, thesis, extra-curricular activities) need to be regu-

larly evaluated in light of the purposes of the program. In order for this process to work well, *transparency* of the program's goals and processes must be manifest to both faculty and graduate students. In order to determine whether or not the various pieces of a Ph.D. program contribute significantly to the goals of the overall program, a regular pattern of reflection and *assessment* of these pieces should become part of the culture of the department.

We believe that the faculty in the department/program are primarily responsible for the health of their programs and thus – along with graduate students – are the *change* agents for their Ph.D. program. These faculties and graduate students are strongly influenced and informed by their disciplines in general (often by their professional societies), funding agencies, and respected senior scholars in the field. They also operate within an institutional context and thus the encouragement of the university administration to carefully evaluate Ph.D. programs is crucial.

The perspective outlined above informed the process we adopted at Carnegie as we developed the CID. We currently have 84 participating departments/programs in six disciplines. We are working with these departments to help them more carefully define the goals of their Ph.D. program, to look at the various components and determine what changes (or new components) are needed to achieve their programmatic goals, to implement and evaluate new initiatives or experiments where needed, and to disseminate widely the lessons they learned from their deliberations and actions. In Appendix I we list the participating departments in the six areas chosen, Chemistry, Education, English, History, Mathematics, and Neuroscience.

Before deciding to include a discipline in the CID we spoke with senior scholars in the field, funders, and representatives of the associated professional societies. We wanted to ensure that the timing was ripe for the CID initiative in a given field and that the various constituents would be *strong* supporters of the participating departments' efforts in improving their Ph.D. programs and disseminating the results of their efforts. As a result of this diverse input we narrowed our original candidates for included disciplines. We formed an advisory committee of outstanding scholars (see Appendix II) and have sought (and generously received) their advice at all stages of the initiative.

Having chosen the disciplines we sought advice on departments to invite to participate. We ultimately decided that it would be best to distribute a general invitation to submit a proposal to all Ph.D. departments in the chosen areas of scholarship. The departments were given information on the CID and asked to submit a brief proposal that would summarize the reasons they felt the timing was ripe for their department to participate, identify a leadership team, document university support for the project, tentatively identify issues, and outline how they would assess their efforts to improve and how they would propose to disseminate the results of their work. An important novel component of this process was that Carnegie was not providing financial resources for their efforts – if needed these would be provided internally by the department or institution! Carnegie would provide background materials and facilitate the departments' efforts via site visits, convenings, essays, and letters of support to various potential funders, etc.

To my knowledge, the idea of getting the significant attention and time of well-respected graduate research departments without using financial inducements is not a typical approach. What would happen? The response from universities was terrific! We ended up considerably expanding the number of departments included and still had to turn down proposals from departments for which we concluded the timing was not ripe. The chosen departments/programs have well respected programs, as a group cover a diversity of institutions in terms of public/private, size, and special mission. There are several institutions that have multiple departments in the CID. It is gratifying that institutions included in the MAGS membership were especially responsive to our invitation to participate.

As many of you are aware, we were forced for the initial phase of the project to divide the participating departments into two groups – partner and allied. The difference was required because of time and space limitations. For the first couple of years of the project, we organized annual convenings at Carnegie for the Partner Departments and site visited those departments once each academic year. Communications, reports, essay distribution, and convenings at professional society meetings were held without distinction between Partner and Allied Departments. For the final two years of the Carnegie phase of CID (after the Summer 2004 convenings) we plan to have no distinction among the participating departments.

Participating departments were provided essays about Ph.D. education authored by leaders in their respective fields, and a literature summary of previous studies and recommendations regarding doctoral education in the discipline (as well as summaries of more global graduate education studies). We also made suggestions about how they might proceed in deliberations to make transparent their developmental goals for a Ph.D. graduating from the department, identify areas that might need attention, and finally develop (assessable) new initiatives that would lead to improvements in their Ph.D. programs.

The Carnegie site visits are constructed to provide information and answer questions about the CID by interaction with graduate students, faculty, and administrators. We use the visit as an opportunity to gather information on the nature of the departmental deliberations and the important issues and challenges that are emerging. We try to both challenge and encourage the departmental leadership team by provocative questioning and by modeling a dialogue we believe will be helpful to their efforts. We purposefully use the occasion to help the leadership team garner wider support and engagement by the department and university.

The summer and professional society convenings provide opportunities for the departments to share information with each other, gain insights and practical help from each other and generally to be effective “friendly critics.” We use the convenings to provide information and stimulate further discussions about general topics such as assessment of departmental initiatives and evaluating scholarly development (educating a future steward of the discipline); we also discuss creating robust intellectual communities and the use of multi-media technology to document and disseminate their work. We make sure there is opportunity for the departments to present

their work to date and be publicly encouraged and made accountable for their progress.

It might be useful for me to briefly comment on the deliberations and some of the areas of focus of the participating departments. Of course faculty and graduate students have very full plates – they are time stressed. Thus, historically, unless there was a short term “crisis” (a test, a grant deadline, preparing for a meeting or a lecture) one simply did not “have the time” after setting priorities to engage in an activity that might improve in the future something that was already judged as OK. So the very act of deliberating, holistically, and in some depth about the goals, etc., of a Ph.D. program is itself an unnatural act. Therefore, many departments have found it easier to first focus on particular areas that are an immediate focus of concern. After deliberating about possible solutions to the particular area to be addressed and implementing changes, they seem to be more open to turning to more general considerations and desired outcomes for their programs. It will probably come as no surprise that some of the main areas of attention include the first year or two “core” curriculum, the preliminary exam, the quality of mentoring and advising, and educating students more broadly about professional development (e.g., career options, oral and written communication). More details will become available as departments and Carnegie begin to make the work of the CID widely publicly available, beginning in about a year from now. One important conclusion is that the leadership and insight of graduate students is absolutely wonderful and crucial to the general progress the departments have made to date. Another general observation is that many of the symptoms departments have been reporting so far are associated with the need for more fertile intellectual disciplinary community between and among graduate students and faculty. At a later time and place I look forward to a more in depth discussion of this fundamentally important area.

The project has reached the stage where both Carnegie and the Participating Departments need to begin to implement the dissemination strategy. This means using the multimedia tools and publishing outlets to make public the work in such a way that it has an impact beyond institutionalization in individual participating departments – that is, it becomes a contribution to field building. Theme monographs and articles targeted at the disciplines as well as higher education in general are part of this strategy. Of course well-documented, assessed experiments are the basis of the work to be disseminated. Without this the news will not be important enough to harvest the potential of the initiative. Based on the excellent work to date there is much to celebrate and about which to be optimistic. But we are not there yet, and more challenging creative work and cooperation will be needed. In all of this the graduate deans at the participating institutions have been and will continue to be absolutely essential institutional leaders. Without the engagement and encouragement of the Graduate School this project cannot succeed. We are extremely fortunate to have the graduate deans as our enthusiastic local partners. This is natural because a fundamental role of the graduate deans and the Graduate Schools is to ensure the quality of graduate programs. They do this by working with departments in ways that create in the faculty the habits of mind to be purposeful, evaluative and transparent with regard to their Ph.D. programs.

Thank you for the work you do – it has been a great privilege for me to serve with you as a Dean of the Graduate School!

Acknowledgement

The Carnegie Initiative on the Doctorate is a team effort. The CID work discussed here has been possible because of the collaborative work and leadership of the other members of the team which includes Chris Golde, Laura Jones, Andrea Bueschel, Leslie Eustice, and Sonia Gonzalez. The leadership and advice of Lee Shulman, President of the Carnegie Foundation continues to be outstanding and crucial, as is the input from our Carnegie colleagues. The financial support of The Atlantic Philanthropies has made this initiative possible and we gratefully acknowledge their contribution.

To learn more about the Carnegie Initiative on the Doctorate, please contact:

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Appendix I**Carnegie Initiative on the Doctorate
PARTICIPATING DEPARTMENTS****CHEMISTRY**

Duke University
Howard University
Northeastern University
Stony Brook University
The Ohio State University
University of Colorado at Boulder
University of Michigan
University of Oklahoma
University of Texas at Austin
University of Wisconsin-Madison
Virginia Tech

EDUCATION

Arizona State University
Indiana University
Michigan State University (ME)
Michigan State University (TE)
Texas A&M University
The Ohio State University
University of California, Davis
University of Colorado at Boulder
University of Georgia
University of Illinois at Urbana-Champaign
University of Iowa
University of Michigan
University of North Carolina at Chapel Hill
University of Southern California
Washington State University

ENGLISH

Columbia University
Duke University
Howard University
Indiana University
Michigan State University
Pennsylvania State University
Texas A&M University
The Ohio State University
University of Georgia
University of Kentucky
University of Michigan
University of Pittsburgh
University of Rochester
University of Toronto
Washington University in St. Louis
Wayne State University

HISTORY

Arizona State University
Duke University
Howard University
Kent State University
Michigan State University
Stony Brook University
Texas A&M University
The Ohio State University
University of Connecticut
University of Illinois at Urbana-Champaign
University of Kansas
University of Minnesota
University of New Mexico
University of Pittsburgh
University of Southern California
University of Texas at Austin

MATH

Duke University
Howard University
Kent State University
Stony Brook University
The Ohio State University
University of Illinois at Urbana-Champaign
University of Michigan
University of Nebraska-Lincoln
University of North Carolina at Chapel Hill
University of Southern California
University of Utah

NEUROSCIENCE

Boston University School of Medicine
Dartmouth College
Duke University
Georgetown University
Michigan State University
The Ohio State University
University of Alabama at Birmingham
University of Illinois at Urbana-Champaign
University of Louisville
University of Maryland, Baltimore
University of Minnesota
University of Pittsburgh
University of Southern California
University of Vermont College of Medicine
University of Wisconsin-Madison

Appendix II

Carnegie Initiative on the Doctorate ADVISORY COMMITTEE

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*President, Emeritus
Bing Professor of Environmental Science, Emeritus
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Chair, National Research Council*

David Damrosch

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One of the Features of a Profession is Its Ideology

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Listening to George Walker, and considering the goals of the Carnegie Initiative, I was moved to compare my academic calling to other professions. I imagined doctors, lawyers, soldiers, clergy, politicians, and others who not only have a job, but a vocation that is a way of life, and I considered what might make these established professions different from an academic career. In line with the Carnegie Initiative, I propose that one of the differences that ought to be considered is a lack of a tangible expressed ideology in graduate education. I suspect that each graduate student would eventually admit to an ideological core if questioned past his or her initial walls of pragmatism. However, it remains the case that neither I, nor many of my colleagues, can remember the last time that someone said out loud that we are involved in more than just pursuing our own curiosity and funding.

The benefits of such a commitment to a defined and noble goal are clear, and can be seen in the examples of other professions. Those involved in research at all levels experience challenges and times of doubt comparable to doctors, lawyers, clergy, soldiers, or any student pursuing such a life-encompassing career. Articulating and remembering the finest reasons for knowledge creation can help us through the times when simple gratification is distant and when our passion is weary. Conversely, in good times, dedication to an ideal greater than our individual work can give us a perspective about our role that seems too often to be forgotten.

Not only does this movement fit in well with the drive of the Carnegie Initiative as discussed by George Walker, but it would also encompass one of the stated goals of graduate leaders. One of the things mentioned at the MAGS meeting by student presenters is the identified desire to address the social responsibility inherent to a graduate career. In my opinion, the awareness of students of their sources of support commonly raises the question of what we provide in return for our stipends and tools. It is to be hoped that an expression of a general ideal and broad goal will allow graduate students to direct their energies to positive pursuits, rather than being left to judge their performance solely by their own exhaustion and degree of sleep deprivation.

If it is accepted that that an ideology of academia exists and resonates with students, it is worth considering the possible reasons why our most noble goals are left unexpressed. Perhaps the idea that academic exploration is noble is considered too obvious, or perhaps we're all nervous about giving academics another reason to think

highly of themselves. Perhaps we all have trouble identifying what our ideology is, or how to tap into and express that call to duty. We may, at times, even doubt the validity of the premise that we are called by a deep or noble drive. While these arguments and motivations undoubtedly stand in the way of appeals to our finest selves, each of them can be overcome after some amount of consideration. However, I think that there is also an institutional obstacle which must be considered head-on.

Because graduate education is dependent on a mentor/protégé relationship, it is often the case that the issues that are most often considered are practical, detailed issues of current research. My advisor knows me too well to try high-minded ideology as a possible cure for my difficulty isolating RNA, but in the process, I think we together can lose sight of the forest for the blades of grass. For this reason, I think it falls to high-level administrators to begin the conversation with their chairs of programs and heads of departments not only of the passion that drives us to pursue our goals, but also of the noble benefit we provide for those who support our endeavors. Of course, an appeal to ideology will not take the place of any of the honest work with which deans currently spend so much of their time. We are not executives who are looking only for the right mission statement. But, in time, it is likely that a consciousness of the larger picture will enable more efficient progress on the details.

I was gratified to hear the responses to my suggestion, and some of them are included here. It was agreed by many in the audience that a larger discussion of the passion inherent to research would be beneficial to both faculty and students. George Walker described how each side of the table had expressed a desire to discuss their drive to research more, but felt that the other side might consider such testimony inappropriate.

John Slattery picked up on my attempt to describe a professional ideology as something in addition to academic passion, although the two are related. He suggested that we often, like students presenting data, “start in the middle” without giving sufficient background regarding the purpose of an endeavor. Discussion followed that included some suggestion about how the generation of new knowledge is part of the highest expression of a civilization. Academicians build (or carve out) a monument to human initiative that can be at the same time beautiful, functional, and awe-inspiring.

Questions were raised about how it might be possible to describe the ideology, or common drive, of some fields. Although some suggestions were given, I think it's fair to say that a final consensus was not reached. This brings up the larger point that perhaps a final idea of the professional ideology is not the ultimate goal. An inability to define or express the ideology of academic endeavors in a particular field should not preclude us from discussing its possibility. Indeed, a discussion of such an ideology might serve many of the purposes discussed above even if it never reaches a final conclusion.

Graduate Education: Making It Purposeful, Assessable, and Transparent Response

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As George Walker has pointed out, the Carnegie Initiative on the Doctorate should, among other things, help make doctoral programs in the six participating disciplines more “purposeful, assessable, reflective, and transparent.” I’d like to focus on the graduate dean’s role in this process, especially at institutions like Ohio State, where a great deal about graduate education is decentralized, with admissions decisions, curriculum, examinations, student advising, professional development, and other activities taking place primarily within each graduate program. All too often, the information-sharing and programmatic collaboration that does take place across individual programs is driven by such forces as the need to restructure to accommodate budget cuts. One of the most promising aspects of the Carnegie Initiative on the Doctorate is that it presents opportunities for graduate programs to interact about doctoral education not only with other graduate programs in the same discipline across the country but also with other graduate programs in *other* disciplines, both across the country and on their own campus. In addition, it encourages – even mandates – interaction with stakeholders, especially current and former graduate students.

My comments are organized around three familiar concepts that are important for graduate deans, each of which is also embodied in the Carnegie approach.

- Graduate deans build strategic alliances and are alert to opportunities for partnerships in new areas.
- Graduate deans use resources – money, people, space, influence – strategically.
- Graduate deans listen to, and call on, stakeholders in creating and adjusting their vision for graduate education.

Strategic alliances

Graduate deans are consummate alliance-builders. Traditional allies include such campus colleagues as deans, faculty members, directors of graduate programs, administrative staff in graduate programs, the provost, the president or chancellor, the vice pres-

ident for research (unless the graduate dean has that responsibility, too), and – last but certainly not least – graduate students and postdoctoral fellows. Connections with graduate deans in one’s own state, region, and throughout the country are also invaluable. Similarly important are relationships with key people in government agencies, foundations, and other such organizations.

It is also important to have strong relationships with other university administrators and friends of the university. Through these relationships, graduate deans improve their understanding of other areas of the university while sharing information about the priorities and problems in graduate education. Increasingly important allies and partners for graduate deans include

Student Affairs staff, who oversee graduate housing, disciplinary and/or academic integrity policies and procedures, student health services and student health insurance, student fees and billing, career services, diversity initiatives, and, on some campuses, international student services.

Human Resources staff, who deal with the compensation, benefits, and workplace issues that are in the forefront on campuses where there are graduate assistant unions or union efforts.

Business Affairs staff, who deal with student billing, the university’s budget, and research grants.

Alumni Association staff, whose interest in graduate and professional student populations seems to be increasing.

Development staff, who at most institutions are the gatekeepers to virtually all campus fundraising efforts.

Institutional research staff, who preserve, interpret, and promulgate institutional data on which critical institution decisions are made.

The list of campus partners and allies could, of course, be much longer; including staff involved with the library and information technology, faculty and TA development, student records and admissions, legal affairs, government relations, and so forth.

The Carnegie Initiative on the Doctorate itself represents a new and important partnership: within programs themselves, across programs within a single institution, across institutions, with disciplinary societies, and so forth. Ohio State is the only institution in the country at which all six eligible fields of study are participating. Each of the six fields is working with Carnegie to develop its own project game plan. The Graduate School is also helping coordinate activities, especially the sharing of information across disciplines. We are hoping through the Carnegie project to build on the information collected at Ohio State for previous and ongoing data collection activities. We hope to learn better how to incorporate graduate student and alumni voices into efforts to improve graduate education and the climate in which graduate students study.

Strategic use of resources

The Carnegie Initiative on the Doctorate has tested the Graduate School's ability to leverage the modest resources that Carnegie has made available and to do so in a way that generates funds and builds confidence among University administrators about the eventual outcome of the project. The Graduate School has secured some financial support for the project, and it is providing staff support in the form of an assistant dean and a graduate assistant. As noted above, the Graduate School's resources are primarily being used to help coordinate campus activities, especially those related to data collection and analysis. We hope to capitalize on the survey activities imbedded in the Carnegie project to improve the University's ability to collect meaningful data from all Ohio State graduate students and, eventually, from alumni of the Graduate School. As a base, we have significant sources of historical data, including the *Graduate Quality of University Experience Report*, issued in 2001 by the Graduate School in conjunction with the Ohio State Council of Graduate Students.

Strategic use of stakeholders

One of the most exciting aspects of the Carnegie Initiative on the Doctorate is the expectation that current and former graduate students will be included in each participating program's activities. Why do people come to graduate school? How welcoming do they find the university climate? How satisfied are they with their experiences? Why do they leave their graduate programs before finishing them? What career paths do people pursue after graduate school? How well prepared for those career paths are people after graduate school? Do mechanisms exist that encourage graduate students and alumni to be involved with their graduate programs, the graduate school, and the university?

As it happens, my two primary responsibilities in the Graduate School at Ohio State are alumni relations and development. I was fortunate to inherit systems already in place in both areas. Our primary connection to the Alumni Association is through a Graduate School representative on its Alumni Advisory Council. The Graduate School itself used to have an Alumni Advisory Council, and we are considering reinstating it. With respect to development, although I am not part of the university's central development office, I am included in development news and activities, and I have access to development resources, including annual fund and major gift assistance. I was delighted to find that the Graduate School has for many years been an established part of the annual phonathon and direct mail cycles. I also have access to the alumni and development database of donors. Although it will always be important to be sensitive to overlapping constituencies, the Graduate School at Ohio State has a solid foundation from which to build and strengthen relationships with alumni. Good relationships with alumni, of course, begin with treating graduate students well while they are in graduate school.

Conclusion

It is not hard to support the goal of making graduate education more purposeful, assessable, reflective, and transparent. Graduate deans are playing important roles in the CID, including coordinating activities on individual campuses, providing funding, encouraging innovation, and endorsing the overall mission of the project. One outcome of the Carnegie Initiative on the Doctorate may be to help make graduate education more inviting to a broader cross-section of American society, especially in the science, engineering, and math fields that have experienced declining domestic enrollments. While the international students and scholars who study and do research at our institutions of course make substantial contributions to our universities and to society, it is equally obvious that it is also important for us to provide educational opportunities to as many U.S. citizens as possible. Our nation needs to attract its best and brightest into all fields of learning and to ensure that their preparation for graduate study positions them well to succeed in their graduate programs.

This brings me back to my starting point, the role of the graduate dean. Are graduate deans doing enough to capitalize on what we know about who is coming to graduate school and why? What about who is *not* coming and why? Is there more that graduate deans should be doing to encourage more students to study such subjects as science and math in grade school, high school, and college? Perhaps more importantly, should graduate deans be doing more to help strengthen K-12 education, especially in science and math? Graduate deans are already involved in these issues through summer research programs for undergraduates and similar activities. The time may have come for graduate deans to embrace issues related to preparation for graduate study more fully, assuming leadership through their strengths in alliance building, strategic resource use, and ability to respond to stakeholders.

Learning, Training, and Research: Defining Graduate Education

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Abstract

The number of professional master's degree programs in the United States is growing rapidly. These programs oftentimes do not require students to complete a thesis as part of their program of study. The purpose of this presentation is to discuss what takes the place of research in creating a graduate level experience for students in non-thesis or professional master's degree programs. Results of a study examining the practices at MAGS institutions are shared. Finally, recommendations for graduate deans overseeing such programs are discussed.

Introduction

What takes the place of research in creating a graduate level experience for students in non-thesis or professional master's programs? To begin, I'd like to quickly describe what I mean when I refer to a "professional" master's degree program and will do so by comparing it to a "classical" master's degree program.

A classical master's degree usually provides a depth of knowledge in a given content area. This degree may be completed in preparation for doctoral work, though not all students who pursue the classical master's go on for the doctorate, or even plan to do so. At times, the master's has been reportedly awarded as a consolation prize for an individual who could not successfully complete the doctorate. This classical master's degree program has traditionally included a component of independent research, the thesis.

The professional master's degree program is developed with the needs of the employer in mind; indeed, many of these programs are developed hand in hand with industry. The professional master's degree is commonly an entry-level practice degree and frequently has some oversight by an external accrediting agency. Compared to the classical master's, the expectation that a student completing a professional master's program will continue into doctoral study is not as typical. The research requirements for this degree vary, as we will soon discuss.

I would also like to briefly comment on some trends in higher education. As you know, master's degree programs are increasing in popularity. Record numbers of incoming freshman anticipate getting a master's degree, especially as the workplace increasingly requires an undergraduate degree for jobs that previously required only a high school diploma. Simultaneously, colleges and universities that were not so long ago classified as liberal arts institutions are offering master's degree programs. Oftentimes, these programs are professional, rather than classical, master's degree programs. Finally, these new professional master's degree programs have brought increased revenue to these institutions of higher education.

Review of the Literature

In the 1993 book *A Silent Success: Master's Education in the United States*, Conrad, Haworth and Millar indicate that one of the attributes of high quality master's programs is a tangible product (such as a thesis, a project or report). This product should be of value both to the student and to their field of study. Conrad and his co-authors also discuss the importance of presenting one's work to either a faculty committee or to an extra departmental audience. They discuss the importance of the process of developing this tangible product, as it requires the student to integrate the knowledge they have obtained and to further their analytical, written and oral communication skills. This also allows the master's student to become more self-confident in his or her ability to make a contribution to their chosen field. Finally, the authors comment on the importance of faculty guiding students through the process, discussing problems, critically reviewing the student's work and providing constructive feedback.

In another publication, this one by the Council of Graduate Schools, *Master's Education: A Guide for Faculty and Administrators - A Policy Statement (1994)*, the authors echo Conrad, et al., stating "...the inclusion of a culminating or capstone experience in all master's programs is strongly recommended." The document goes on to say, "the master's program is often the first academic experience in which a student is expected to integrate prior learning," as the culminating project requires the student to apply what he or she has learned. The authors add that while this culminating project will not necessarily be original research, it should be a new application of ideas. Again, as Conrad and his colleagues recommended, these authors also emphasize that the student should be able to communicate about the work he or she has done both orally and in written form. These skills are useful on the job, be it in academia or in industry.

Two Australian researchers, Mullins and Kiley (2002), looked at how experienced examiners assess research theses. These authors sought to identify criteria used by university examiners in making their judgments regarding postgraduate research theses. They identified components of both poor and outstanding theses. Poor theses have a lack of coherence, a lack of understanding of theory, the wrong problem was researched, the thesis was sloppy, there were mixed or confused theoretical and methodological perspectives, or the writer was not being able to explain what had been argued. On the other hand, outstanding thesis writers had a creative view of the

topic, structured their argument well, had a coherence of theoretical and methodological perspectives, and included a critical self assessment.

In a similar article, Winter, Griffiths and Green (2000) also identified positive and negative features of a practice based Ph.D. While our primary concern this morning is master's education, I felt that these criteria were worth review, especially related to "professional" education, an area that has not been thoroughly researched.

Negative features as identified by Winter, et al., included lack of intellectual grasp, lack of coherence, poor engagement with the literature, lack of originality, an inability to generalize the findings, methodological weakness, and poor presentation. Positive criteria were described as having a good intellectual grasp, coherence, engagement with the literature, grasp of methodology, and strong presentation. Originality and the ability to get the paper published were also positive features.

Criteria for practice based theses as identified by Winter and her co-authors were similar to many of those found by Mullins and Kiley for classical theses. This leads me to ask, should they be different? Or, is the difference between the classical and professional thesis the nature of the question the student sets out to answer?

Accreditation Association Standards

Accrediting association criteria can impact the actions of faculty and their decisions regarding culminating projects. For example, Zimbalist and Rubin (1981) found that when the national accreditation association of social work programs loosened its research criteria in an effort to increase integration and experimentation, most schools significantly decreased their requirements. In the field of education, the Department of Elementary and Secondary Education in the state of Missouri has, for several years now, required portfolios of graduating teachers. This requirement has led to a number of programs adopting portfolios as their students culminating project in the master's program.

University Practices

What is the practice in most universities? What do institutions require for their non-thesis and professional programs?

In a study by Deutsch and Nicholson, the authors surveyed CGS members and found that most universities (76%) required some kind of comprehensive assessment/capstone for all master's students. Of those, 27% indicated that an internship could be allowed as the comprehensive/capstone experience in the program. Forty percent of the reporting institutions allowed collaborative capstone experiences, and while the most popular committee size in their study remained at three, the advent of capstone courses (typically taught by only one faculty member) left the judgment as to whether a student had "passed" their comps to one (or sometimes two) faculty member(s). And finally, while a majority of respondents in this study indicated that most, if not all, programs within their institutions administer a comprehensive assessment, few reported an institutional policy to that effect. As you will see, this is what I found in my investigation as well.

Study and Results

I recently completed a study of 75 MAGS member websites (50% of member institutions) where I searched each institution's website for information pertaining to thesis and non-thesis options in their master's degree programs.

In brief, 21% (n=16) required a thesis in all master's programs at their institution. Universities that required all master's degree students to complete a thesis tended to have programs in only the "classical" disciplines. This practice was more common in smaller, master's classified institutions.

Some universities (11%, n=8) had no information on their web sites regarding requirements for either a thesis or a non-thesis option. This practice was generally associated with smaller, master's level institutions that offered only a handful of professional master's programs.

Only 17% (n=13) had university standards regarding non-thesis option degree requirements. Larger, doctoral granting institutions were more likely to have established formal university policy regarding expectations for non-thesis option programs of study. However, the stated practices varied widely from institution to institution. Finally, just over half of the institutions studied (51%, n=38), appeared to allow departments to establish standards regarding non-thesis option degree requirements. Practices differed from school to school even within a given institution.

The most common practice in non-thesis option programs was to require the student to complete additional credit hours. The number of additional hours ranged from 1 to 12 with 6 additional credit hours being most typical. While several programs specified that the additional hours had to be in either investigation or research seminar courses, others allowed more latitude in course choice. Additional courses in combinations with written and/or oral comprehensive exams were required at several institutions.

Some universities required an internship or practicum in lieu of the thesis. A number of institutions required that non-thesis option students complete a project. Again, parameters around the project varied. Some required more than one project, some specified the length of the research paper written regarding the project (e.g., 20 pages), and others required multiple essays.

Several universities asked students who were taking the non-thesis option to complete a report with a public presentation of the information. Portfolios (sometimes in addition to a research paper and sometimes not) were typical in education programs. And, recitals were common in the performing arts.

There were also variations in program descriptions. One institution indicated that the thesis option provided depth while the non-thesis option provided the opportunity for more breadth. Another university stated that the non-thesis option was specifically for the part time student with the professional experience to constitute lab

research equal to a thesis. Others recommended the non-thesis option for students who work full time and who want to teach in either a secondary school or in a community college. Another university stated that either the thesis or non-thesis option would be appropriate for the student wanting to work in industry.

Several universities offered an M.A. in a traditional science area as a non-thesis option, whereas the M.S. was awarded to those students who completed a thesis. Another provided a certificate to the student completing the non-thesis option rather than the degree that was reserved for students completing the thesis. Several universities stated that the non-thesis option served as a terminal graduate degree.

While most institutions did not have differing GPA requirements for students in the non-thesis option, one institution required a GPA of 3.25 to be eligible for non-thesis option. If the student did not have the 3.25 GPA, he or she was required to take both written and oral comprehensive exams.

Summary

In summary, little has been written specifically in regards to professional master's degree program criteria. Most institutions appear to leave decisions regarding criteria for culminating master's projects to the departments. Requiring additional credit hours is the most common route to obtaining a non-thesis option degree, though some programs require some type of project or research activity. Finally, there is considerable variation in expectations for students in non-thesis or professional master's programs.

Recommendations

Given the findings, I recommend that deans of graduate schools work with faculty to establish base university criteria for non-thesis projects. Furthermore, as others have indicated before me, I believe that all master's programs should include a culminating product that the student is required to present both orally and in written form.

In proposals for new programs, faculty should be engaged in a discussion of desired outcomes for a student with a professional master's degree. A series of questions should be asked. For example, is it important for a graduate of this program to be able to perform independent research or does the graduate need only be a good consumer of research, able to critically analyze findings and incorporate those findings into his or her work? Will the student work independently once in his or her job, or is a team situation more likely? How can a student best demonstrate comprehensive knowledge of their studies? Is a comprehensive exam most telling or would a practicum provide a more natural context to evaluate mastery of the content? Since oral and written communication skills are vital to most every job, how and where in the curriculum do we ensure the student possesses those skills? Questions such as these would allow the faculty to develop a culminating experience that parallels

expectations most likely to be found in a future job, if that is the goal of the program. Finally, additional direction from the Council of Graduate Schools in relation to best practices in master's education, particularly in regards to professional master's programs, would be most appreciated.

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Interdisciplinary Programs

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I will describe several different approaches to interdisciplinarity that have been adopted at Washington University. All involve Ph.D. programs, directly or indirectly. The first is a suite of programs in Biological Sciences, which we call "The Division of Biology and Biomedical Sciences," or "DBBS," or simply "the Division." It is a consortium of seven conventional departments in the Washington University Medical School, plus two in Arts and Sciences, the current names of which are shown in Figure 1.

Pre-Clinical Medical School Departments
<u>Anatomy</u> and Neurobiology
<u>Biochemistry</u> and Molecular Biophysics
Cell Biology and <u>Physiology</u>
Genetics
Molecular Biology and <u>Pharmacology</u>
Molecular <u>Microbiology</u>
<u>Pathology</u> and Immunology
Arts & Sciences Departments
<u>Biology</u>
<u>Chemistry</u>

Figure 1

In the late 1960s it became clear that many new disciplines were emerging which did not fit neatly into the traditional disciplinary categories. One solution to finding a home for these new areas was to tack them onto classical department names (which are underlined in Figure 1). For example, "Anatomy" became "Anatomy and Neurobiology," etc.

But even these changes did not fully address the new complexity: for example, a student interested in Neurobiology might use techniques from Biochemistry, Molecular Biology, Immunology, etc. So in 1974 we decided to create a set of graduate programs that were not allied with specific departments. These would be as interdisciplinary as the faculty they included wanted to make them. Indeed, a single faculty member of a given department could belong to any number of graduate programs, and thereby gain access to students with widely varied interest. Also, by serving on dissertation committees for students in three or four different programs, they got to meet new faculty from diverse sub-disciplines. This very loose, fluid structure allowed new programs

to be created relatively easily, and old programs to be merged into new configurations. The current line-up of twelve graduate programs is shown in Figure 2.

Graduate Programs in Biology and Biomedical Sciences
Biochemistry
Chemical Biology
Computational Biology
Development Biology
Evolution, Ecology and Population Biology
Immunology
Molecular Biophysics
Molecular Cell Biology
Molecular Genetics
Molecular Microbiology and Microbial Pathogenesis
Neurosciences
Plant Biology

Figure 2

Notably absent are Physiology (Parceled out to Molecular Cell Biology and Neurosciences) and Pharmacology (divided up into Molecular Cell Biology and Chemical Biology). The most recent casualty was Bio-organic Chemistry, which morphed into Chemical Biology.

The DBBS programs comprise over 350 faculty on two campuses and have close to 500 graduate students. There are 90 – 100 new students admitted each year. Graduate students often start out in one program but later switch to another, so program affiliation is loose. About 35 – 40% of all Ph.D.'s at Washington University are awarded in these twelve different programs.

Now, thirty years later, we can look back and ask whether the DBBS experiment has been successful: the answer is clearly a resounding yes. We cannot imagine training students in Biological Sciences any other way today. Moreover, the system has been copied widely at other institutions, so the problem of discipline recognition is moot – everyone knows what a cell biologist does, what a neural scientist does, and so forth. For this reason, the employability of graduates is not harmed by interdisciplinarity per se. (However, the job market is fairly saturated in most of these areas, leading to the necessity of multi-year post-doctoral stints for most graduates, but this is a complex function of the NIH research and training budget, medical schools' clinical revenues, the impact of HMOs on these revenues, etc.)

Students in DBBS enjoy the ability to switch readily from one program to another. This is actively encouraged by a requirement that they experience research in three different laboratories during their first year. Faculty appreciate the ease of creating new graduate programs. The most recent example is Computational Biology. It took very little effort for a group of faculty leaders to identify others who wanted to be involved in the new program, and it did not matter whether they were already affili-

ated with existing programs. So in a few weeks' time a steering committee of interested parties could enlist 15 – 20 potential program members. A few weeks later the outline of a viable new program could be presented to the Graduate Council for approval. Our Graduate Council has grown accustomed to dealing with these events. The DBBS by now has established a good track record of sound fiscal management, so approval is usually readily granted by the Graduate Council. More could be said about the DBBS and how it works, but I'll leave that for the question and answer period.

We have number of other new interdisciplinary programs which are in the humanities and social sciences. These tend to be organized quite differently from the foregoing model. Most of these have involved the creation of Certificate Programs (see Figure 3). These involve clusters of five to ten faculty who teach five or six related graduate courses that focus on areas like Women's and Gender Studies, American Culture Studies, International Studies, etc.

Certificate Programs
American Culture Studies
Language Instruction
Women & Gender Studies
Institutional Social Sciences
Human Resources Management
Teaching College Writing
International Studies

Figure 3

The oldest of these programs is Women's and Gender Studies. It attracts students primarily in humanities disciplines, especially English, German, and Romance Languages. Students pursue this certificate because of their research interests, as well as teaching interests. Our experience is that having this certificate in addition to a disciplinary Ph.D. helps students in the job market. It does not add noticeably to their time-to-degree, and does not dilute the intensity of their disciplinary focus. We are beginning to hear similar claims from graduates who have the certificated in American Culture Studies. Most of the other certificate programs are too new for us to have any experience on their impact on employability of graduates that hold them.

Several of the certificate programs conduct summer seminars. This allows them to spend extra time focusing on a range of specialty topics. These programs generally have managed to raise endowments that are used to pay summer stipends, and of course the students appreciate that aspect. We have some other interdisciplinary programs, but the two types described here – the large consortium and the certificate – appear to work best.

These interdisciplinary programs are all "curricular," in the sense of requiring courses, and course units. We sponsor a number of other activities that are "co-curricular," which can add a novel dimension to a graduate student's experience. One of these is

our “Summer Web Workshop” series. Some of you may have heard Associate Dean Elaine Berland’s presentation describing these at a CGS meeting not long ago. These are taught at two different levels. At the basic level we teach website design, and by the end of an intensive one week summer session, a student will have acquired all the skills necessary to design his/her own web page. This page is usually associated with a course the student may be TA-ing for. About 60 graduate students take this course each summer, and it is very popular. We have had many reports that these skills enhance the success of graduates in the job market.

The second Summer Web Workshop is a course in the design of an on-line lecture. This course is more advanced and lasts most of the summer. We generally have six to eight students enrolled. The on-line lectures the students produce are sometimes demonstrations of their dissertation research; sometimes they are modules designed to enhance a course that a professor is teaching. The students who complete this workshop generally go on to be instructors in either the basic or advanced (on-line lecture) courses in subsequent years. When they graduate these students have no difficulty finding jobs. Indeed, they are highly sought after for their skills. Several have found permanent jobs working at Washington University. We do many other things with graduate students that may be described as “co-curricular,” but whether one could truly call them “interdisciplinary” becomes questionable.

Finally we have the “Interdisciplinary Ph.D.” for the rare student who has a “hot topic” that does not fit any regular program. We usually admit one such student every two or three years. To be considered for this program a student is required to complete 24 course units in a regular Ph.D. program, after which a petition for admission to Interdisciplinary degree status may be addressed to the Graduate Dean. A committee is formed comprised of four faculty which then supervises a qualifying exam, and additional 48 units of course work and a dissertation.

The three questions that I proposed to stimulate further discussion are

- a. How should the components of an interdisciplinary degree program be determined? (How much tailoring to students’ specific interests should be allowed? What should roles of departments be? What should the role of the Graduate Council be?)
- b. At what point does breadth become the enemy of depth? (How do we know if the accumulated knowledge is becoming too shallow?)
- c. Is there a demand for interdisciplinary degrees in the marketplace? (How do we distinguish a reluctance to accept the “Interdisciplinary” title on the diploma from a bad job market in general?)

Using Assessment to Improve Graduate Programs

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Abstract

Graduate education, especially doctoral education, is a system. The inputs, processes, and outcomes are deeply rooted in the culture of the disciplinary faculty. This complex system must be intentionally considered in order to devise effective methods of assessment. The terms “assessment” and “evaluation” are often used interchangeably when talking about curricular and program improvement. Evaluation implies a set of standards proscribed by an outside entity to which an individual or group is aspiring. Assessment implies an internal process, one that is developed, implemented, and used by faculty for program improvement in teaching and learning. Both indirect and direct methods of assessment are defined and discussed. The key to effectively using assessment to improve graduate programs lies not only in the collection of evidence that is outlined in any assessment plan, but also in the active pursuit of closing the feedback loop. There are multiple “players” engaged in the role of encouraging assessment: disciplinary societies, accreditation bodies, rankings, and the graduate dean. These players and roles are explored in this paper. Finally, we discuss explicit suggestions for implementing successful assessment plans. Assessment plans with the analysis of and an active feedback loop for the outcomes data and information can form the basis for effective graduate program improvement.

Introduction

Graduate education, especially doctoral education, is a system. The inputs, processes, and outcomes are deeply rooted in the culture of the disciplinary faculty. In fact, graduate education is a complex system with *multiple inputs*, such as student and fac-

ulty characteristics and expectations, departmental, programmatic and national disciplinary cultures, financial and other resources; *multiple processes*, such as coursework, comprehensive exams, theses and dissertations, and internships; and finally, *multiple outcomes* such as degree completion, withdrawal or dismissal from programs. Furthermore, there are “systems delays” such as stop-outs, program changes, or lapses in resources that complicate our understanding between inputs, processes, and outcomes and any intervention that we make in order to improve the desired outcomes.

This complex system must be *intentionally* considered in order to devise effective methods of assessment. Further, the often-stated desired final goal of master’s and doctoral degree completion that we may wish to assess is itself actually a penultimate step in the graduate education process with the final goal, in reality, being a productive career that contributes to the discipline and society – nationally and/or internationally.

For purposes of this paper, we will focus on assessment as much more than simply student learning. Our focus is on graduate program outcomes and goals such as student learning, skills development, and career placement. Assessment overall may be more complicated with doctoral programs, as compared to coursework-based Master’s degree programs, although the “tools” are similar. In addition, much of the national discourse on assessment in higher education is focused at the undergraduate level, but creative application of the tools, plus intentionality of use, provide a useful way to apply the general knowledge and ideas to graduate education. We focus here on the outcomes for research-based master’s degree programs and doctoral programs, as Barbara Braden covered many aspects of assessment for comprehensive master’s-focused institutions during the MAGS 2002 annual meeting (Braden, 2002).

Thoughtfully designed assessment plans are requisite for effective program improvement. The plans, based on faculty discussions of goals, along with the analysis of and an active feedback loop for the outcomes data and information form the basis for program improvement.

Assessment, Evaluation, and Evidence Defined

The terms “assessment” and “evaluation” are often used interchangeably when talking about curricular and program improvement. While they have similar meanings in common usage, it is important to differentiate between the two. **Evaluation** implies a set of standards prescribed by an outside entity to which an individual or group is aspiring. The assumption that the term “evaluation” implies comparison with external standards is implicit but strong because we distinguish between the terms evaluation and self-evaluation. There is a value judgment associated with the term evaluation and so it implies some type of result usually in the form of a reward (continued institutional accreditation, for example) or sanction (a failing grade). The standards have been determined by an outside body or governing group and the person or the department is being compared to a specific set of criteria.

Assessment implies an internal process, one that is developed, implemented and used by faculty for program improvement in teaching and learning. It is intimately tied to and should be reflective of institutional, college, and departmental mission. Assessment is “the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development” (Palomba & Banta, 1999, p. 4). Using this definition as a framework, the reason for engaging in assessment is not to satisfy standards imposed by outside constituencies, but rather it is to answer internal questions about what students learn in their academic programs and what they are able to do when they graduate.

Because the assessment process is driven by institutional, college, and departmental learning goals, the processes by which departments engage in assessment will be different. What they will share in common, however, is that they should be developed, implemented, and used *by faculty*. Faculty members determine which learning goals are to be measured and how that measurement will take place. Faculty members review the data, interpret the results, and use them for program improvement in the way they deem most useful. There is an intentionality that is required in order for assessment to be used and to be useful.

Assessment Methods and Evidence

Because assessment is an internally defined and faculty driven process, the types and levels of acceptable evidence will vary across disciplines. Evidence is not so much a set of standardized test scores as it is information gathered from various sources that, taken together, allows a department to draw reasonable conclusions about student learning. The focus is on aggregate student learning, not individual performance. For doctoral students, of course, there is one key individual goal: the dissertation, although program faculty could look at aggregate data across all Ph.D. students. For purposes of assessment, *evidence* takes two forms. It can be derived from either direct or indirect methods.

Direct methods of assessment are those processes which evidence of learning is derived from student performance (Palomba & Banta, 1999). Students demonstrate mastery of a faculty-determined set of learning outcomes through something they have done such as written a research proposal in which they have synthesized the literature in the field and used appropriate research methodology. It might be a comprehensive examination in which they have demonstrated an acquisition of knowledge or the ability to critically examine the literature in the field. Internships or clinical settings might require students to demonstrate a certain level of skill. Direct methods require students to show, in some fashion, what they can do and what they have learned.

Direct Methods of Assessment of Student Learning

- Courses – papers, projects, grades
- Comprehensive Examinations
- Graduate Record Exam General Test
- Graduate Record Exam Subject Test

Certification Examinations
 Licensure Examinations
 Locally developed pre-test or post-test for subject matter knowledge
 Portfolios
 Audio- or Videotape evaluations
 Theses/dissertations
 Peer-reviewed publications
 Disciplinary presentations

Indirect methods of assessment tend to be comparison and perception data. Students might take part in exit surveys in which they are asked to reflect upon their experience and make suggestions for improvement. Employer surveys ask employers to share their perceptions of how well students are prepared for industry. Comparison data allow a department to see how “successful” they have been in relation to an established peer group. While these methods are very useful and important parts of the assessment process, they do not measure how well a student has met learning goals and so are not adequate as an assessment process in and of themselves. They provide very useful data which must be used in conjunction with direct methods in order to obtain a comprehensive understanding of student learning.

Indirect Methods of Assessment of Graduate Programs

Comparison or benchmarking with peer institutions
 Career placement of graduates
 Employer surveys
 Advisory groups from professional/disciplinary societies
 Student graduation/retention rates
 Exit interviews with students graduating or leaving the program
 Student satisfaction surveys
 Student course evaluations
 Focus group discussions
 Alumni surveys
 Alumni honors, awards, achievements
 Analysis of grade distributions
 Peer review of courses
 Peer review of program

While faculty members are usually more familiar with the direct methods of assessment, indirect methods can also provide valuable contextual feedback. Indirect methods may require more initial thought and attention to what evidence might be collected and what it means. For example, many graduate programs rely upon student placement as evidence of their graduates’ success, especially with the focus on placement that will be evident in the National Research Council rankings and the Re-envisioning the Ph.D. project (see Literature Cited). If students are offered and accept positions in the academic departments of doctoral-extensive institutions, departments then assume they have been successful in “turning out” scholars who are good researchers and teachers. They are using an *indirect* method of assessment as evidence of student learning.

The difficulty with using placement data as the sole evidence of student learning is that the department is measuring perception rather than actual learning and relying upon that as an indication of success. For example, if a department has four doctoral students graduate and two take positions in industry and two take positions in baccalaureate institutions, is it accurate to say the department “failed” in its mission and that those four students did not learn research or teaching skills or meet any of the learning goals established by the department? That is, in essence, what the department is saying even though a number of other factors (market forces, family obligations, a student’s personal interest) influence student placement.

If, however, a department uses a direct method to assess research skills (for example, using the initial research proposal as a means of directly assessing a student’s ability to construct a sound research design), they are making the determination of student learning based upon something the student has produced and demonstrated to them. Because the ability to conduct research is valued by doctoral-extensive universities, placement data become an important, but complementary method, of assessment that provides additional evidence of student learning in research skills.

Assessment in Graduate Programs

Using assessment presumes that one has established explicit learning goals. While in graduate education these goals may be implicit (“everyone knows what these are”), it is important to make them explicit. What are the goals of graduate education? In a set of preliminary discussions at Michigan State University with University Graduate Council and the Associate Deans for Graduate Education, the following were identified as broad goals for both master’s and doctoral degree students:

- Acquire advanced knowledge and a deeper understanding of the skills and knowledge in their disciplines.
- Develop a sense of responsibility to as well as an understanding of the ethical dimensions of the discipline.
- Develop the competence, knowledge, and independence for the realization of leadership potential.

In addition, for doctoral degree students the following additional goals were identified:

- Master state-of-the-art disciplinary knowledge.
- Develop an ability to synthesize existing knowledge with knowledge that does not yet exist, but which they may generate.
- Generate new knowledge through research/scholarship and transmit that knowledge to others. Through this process, they critically evaluate the literature in the discipline, interpret that literature with respect to their own research/scholarship, and learn the necessary technical and intellectual skills to produce a written document that makes an original contribution to knowledge.
- Develop a deep understanding of scholarly conduct and the ethical dimensions of producing scholarship in the discipline.

How are these goals interpreted and “worked with” at the departmental level? While most graduate programs would agree with these broad goals, in order to be effectively assessed, they need to be operationalized within the context of the discipline. What does “critically evaluating the literature” mean in the department of English, for example? If a student is successfully demonstrating this learning goal, what does it look like? What is that student able to do, to show, or produce to indicate mastery of this learning goal? Is it the same in a department of Chemistry?

Once a goal has been operationalized the next step is to determine how to assess it. Graduate programs have ritualized processes already in place that lend themselves to assessment. For example, the literature review portion of a research proposal might be the venue by which a department could assess the goal of critically evaluating the literature.

The key to effectively using assessment to improve graduate programs lies not only in the collection of evidence that is outlined in any assessment plan, but also in the active pursuit of closing the feedback loop in order to improve the program. The evidence is only of benefit if it is used to improve student learning and related goals. Specifically, the following two questions are fundamental to effectiveness:

- How/what did you change as a result of assessment?
- What happened as a result of the change?

The first question addresses what the evidence showed in terms of student learning. A department using the dissertation proposal as a means of determining whether or not students are able to formulate a sound research design might find themselves engaging in a process similar to the following: A review of the initial dissertation proposals by individual faculty reveals a common weakness among students in their ability to choose the appropriate statistical procedures for data analysis. A review of the required curriculum reveals students are required to take a quantitative research design course, but not a series of statistics courses. The departmental faculty may decide to change curriculum requirements to include statistics courses or they may decide to redesign the quantitative research design course to include an extended unit on statistical analysis.

The second question can only be answered after some sort of change has been implemented. The assessment feedback loop closes after a department has instituted a change and then measured student progress. Using the above example, a department would follow the same procedures of reviewing dissertation proposals of students who had participated in the new curriculum or the redesigned course to see if the students were more able to choose appropriate statistical procedures for analysis.

The conceptual framework most often used for thinking about assessment is a systems approach that connects a series of inputs, processes, and feedback loops. Initial input includes faculty and student characteristics and departmental and disciplinary

cultures and values. These, along with program requirements and other factors, come together to make up an academic program. Student learning goals and activities to support that learning are developed and designed to achieve the defined set of outcomes. Assessment takes place, reflecting a combination of both direct and indirect methods, in order to look at aggregate student learning across the goals. Data collection from the variety of assessment methods leads to data analysis. The feedback loop closes when reasonable conclusions are drawn from the evidence and analysis and changes to enhance student learning are implemented. This begins the new cycle of assessment of the program.

The Role of Rankings

Rankings matter. And, they can have a positive (or negative) effect on assessment and the improvement of graduate programs. For example, the National Research Council Assessment is a high stakes, infrequent, and comprehensive attempt to provide evaluation of doctoral programs. Their recent report, *Assessing Research-Doctorate Programs: A Methodology Study (2003)* states the importance of assessing the quality of doctoral programs in order to ensure continued improvement.

Arguably, the NRC “ranking” of doctoral programs has an enormous impact on assessment of these programs by the nature of the questions it asks and the data that it is prepared to collect. In the NRC analysis that was published in 1995, time-to-degree, doctoral completion rates, student satisfaction surveys, were not part of the data collection. In the upcoming NRC surveys, these topics, as well as diversity, student support, quality of life, professional development opportunities, and placement are included along with the academic measures of quality. With the well-publicized inclusion of placement as an important assessment factor, NRC has effectively added a new indirect assessment tool by which to measure the desired outcomes of doctoral education.

Other commercial rankings (e.g., *U.S. News and World Report*), as well as peer-group benchmarking (Association of American Universities, National Association of State Universities and Land Grant Colleges, Committee on Institutional Cooperation [Big Ten]), also provide data for indirect assessment of graduate programs (and other activities of higher education). It is important to remember that rankings provide programs with valuable comparative data but still remain indirect measures of student learning. These comparative data, coupled with programmatic assessment of direct student learning, can provide a useful picture of a program’s challenges as well as its successes.

While not explicitly a “ranking” activity, federal funding agencies also play a role in setting goals for research and graduate education. One example of this is the National Science Foundation review criteria. Included in these criteria are the expected questions on intellectual merit; but there are also questions on broadening participation of under-represented groups and the benefits to society of the research. Indirectly, these criteria move some of our graduate programs to the consideration of new outcomes and ways to assess the program’s efficacy and impact related to these outcomes.

The Role of Accreditation

Disciplinary/professional accrediting bodies (such as nursing, medicine, engineering, education) have been moving deliberately toward student learning outcomes as a requirement for accreditation. Many professional associations, while not requiring assessment, are strongly advocating its use. Others (e.g., the American Philosophical Association and the American Psychological Association) have moved towards explicitly encouraging outcomes assessment (see Literature Cited).

While some disciplines have their own accrediting agencies, institutions are also subject to accreditation. All six regional accrediting agencies have developed requirements for assessment and all public and private institutions have been required to engage in some form of assessment since 1990 (Ewell, 1993).

The MAGS institutions are organized under the Higher Learning Commission of the North Central Association of Colleges and Schools. The Higher Learning Commission model (<http://www.ncacihe.org/overview/>) is an excellent example of the serious incorporation of assessment. The Commission Statement on Assessment of Student Learning states, in part, "An organization's commitment to and capacity for effective assessment of student learning will figure more prominently than ever in the accreditation relationship established between the Commission and that organization" (The Higher Learning Commission Handbook of Accreditation, 3rd edition).

The Higher Learning Commission has recently revised the criteria for accreditation, effective January, 2005. The five criteria for accreditation and the related core components now have expectations of evidence embedded within them. While assessment has been an expectation of the Commission for fourteen years (The Higher Learning Commission Handbook of Accreditation, 3rd edition), the emphasis is now on the evidence gathered from assessment measures and the way in which that evidence has been used to effect change in the teaching and learning environment at both undergraduate and graduate program levels. While these criteria and core components have just begun to be applied in accreditation self-studies, within a decade most of our institutions will have had experience using assessment in this process.

The Role of Graduate Deans and the Council of Graduate Schools – Specific Steps to Support Assessment in the Improvement of Graduate Programs

There are both challenges and opportunities for the use of assessment in the improvement of graduate programs. Challenges include the belief that graduate education in the U.S. is already the best in the world, and as such requires no changes to the processes already in place. A second challenge is that the language of "assessment" is not part of the lexicon for many parts of our institutions. While assessment is often understood and used for the many professional programs that are accredited, it is not part of the culture in most doctoral or master's degree programs in the liberal arts and sciences. Third, assessment appears to be something new that is added

to our “to-do lists” in a time of widespread budget constraints and overly-busy faculty and staff. Fourth, faculty are always much more interested in ideas, disciplinary content, research, and teaching than in additional processes.

There is an important role for graduate deans and their staffs and for the Council of Graduate Schools in the role and practice of assessment of graduate programs. We offer several ideas for opportunities that a graduate dean might use to continue to move graduate programs forward using assessment for improvement:

- Share information about the national context for accreditation and assessment. Most faculty understand their role in contributing to the general welfare of the institution and are willing to engage in assessment if they can see the value of the process. While some departments may begin the process by viewing assessment as an unfunded mandate, engaging in thoughtful discussion about student learning outcomes, gathering evidence, making changes and then seeing how effective those changes might be can serve as motivation to continue the process. In other words, they might begin assessment because they have to but they will hopefully continue it because they want to.
- Remind faculty members that assessment tools are already in place in most graduate programs in the form of comprehensive examinations, research proposals, internships, theses, and dissertations. Provide a means by which a department can determine if what they do is what they say they do. Incorporate assessment into the regular graduate program review process.
- Encourage departments to use any existing assessment practices already required by accreditation in the discipline. For many programs, assessment is not a new idea. While the requirements for disciplinary accreditation might be different than those required for regional accreditation, some similarities probably exist. Existing practices should be used before new ones are developed.
- Gather and present concrete evidence of what the department is doing now and might be able to do regarding assessment – how they are succeeding with their goals – in a time of tight budgets. This may allow a department to make a more solid case for continued or maybe even additional funding for fellowship dollars.
- Build assessment into the administrative processes already in place within the institution. Michigan State University added a section on assessment to the official University Curriculum Committee form used to request a new graduate program or for changes in a graduate program (see Literature Cited) and we provided assistance to the departments as they began to learn the tools. Beginning the *educational* process on the effective uses and tools of assessment in connection with graduate

program reviews is a productive place to start. Not only will this provide valuable information for the program, but it also allows programs to put in place the procedures they will need to engage in prior to an institutional accreditation review.

- Provide evidence that assessment, especially for an area such as career placement, can strengthen recruitment of high quality graduate students. Posting placement data on a program's website can entice interested graduate students to further explore opportunities.
- Develop some means to provide feedback and comments to departments on their assessment efforts. Too often we ask or require faculty to participate in initiatives only to have them provide the data and do the work without ever receiving recognition, assistance, or even acknowledgment of their efforts. If we are not asking departments about their assessment plans, commenting on what seems to be working well and what might be best looked at from another angle, then the plans will be developed but not implemented, or implemented but no results used. We need to demonstrate to faculty that we ask them to engage in this process because we believe it is of value to them as individual faculty members, to their departments, to the colleges within which they reside, to the institution as a whole, and mostly, to the students we educate.

We should be leaders in the inclusion of both the terminology and the tools of direct and indirect assessment as part of graduate program review. What we can and should do is move beyond simply collecting data for program reviews to using those data as a part of a thoughtful assessment plan. Encouraging departments to discuss goals, methods of assessment, analysis of data and outcomes, and active feedback loops for improvement should become a regular part of program review. As the professional and disciplinary societies move toward a common expectation of engaging in assessment, and as we as graduate deans continue to demonstrate the effective use of assessment for improvement, we will begin to make this a part of the culture of graduate programs.

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Re-envisioning the Ph.D. (<http://depts.washington.edu/envision/>)

An Ideal Doctoral Research Training in Science

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Introduction

Innovations resulting from science and technology have positioned the United States in a leadership position globally. These innovations have resulted in huge investments in basic research and the quality of higher education programs. The advances in science and technology (e.g., genomics, information technology and nanotechnology) have improved the quality of life and health for people in the U.S. and around the world. Graduates of U.S. higher education institutions have played an important role in the recent advances in science and technology. Our educational institutions have trained future scientists and engineers for the academic and commercial sector not only for the U.S. market but also for the international sector.

The U.S. doctoral education has been hailed as one of the best in the world. I have been asked to address the characteristics of the ideal doctoral education. Clearly, the educational experiences students receive vary from institution to institution within the U.S. as well as education received in different countries. Having gone through the American experience as a graduate student at the University of Minnesota and having guided many excellent graduate students as a professor at Iowa State University, I am of course biased towards the American experience that provides balanced training between didactic course work and research experience. The comments included in this paper are based on my own experiences as a student, as an advisor to students, as a director of two graduate programs at Iowa State University, and now as a graduate dean at the University of Nebraska-Lincoln.

What is Appropriate Training for the Ph.D.?

The appropriate training varies from discipline to discipline and among students. First and foremost, training should provide the graduates the ability to independently think, solve complex problems, and pursue innovative research. Graduates must have core competencies in their discipline, understand basic principles and must be knowledgeable in contemporary technologies and approaches in their discipline. This is important as the science is moving fast and there are scientific technological advances being made every moment. The ability to propose hypothesis-based research, to critically interpret others' results and the literature, to discern where are gaps in research, and to determine whether the data support the claims being made are essential elements of training. Increasingly, science is becoming more complex and the problems are so difficult that it requires input from multiple disciplines; hence the skills to be able to

work in an interdisciplinary environment must be instilled. Experiences in a corporate setting can broaden students' experience and can be helpful to them in securing positions in the private sector. Similarly, international research experience can provide an advantage in gaining positions especially if the discipline and research topic pertain to international problems (e.g., zoonotic disease or public health research). Communication skills, both written and verbal, are essential. Graduates must receive mentoring and training in how to be a responsible scientist. In addition to the above skills, personal background, needs, and desires of the doctoral student should be taken into account in designing their program.

How Are These Skills Instilled?

Students acquire these skills through course work, working with graduate advisor mentors, graduate committee members, fellow graduate students, and postdoctoral fellows. Participation in journal clubs can be extremely valuable in learning skills to critically evaluate others' work and in formulating new research directions. Requirements to attend departmental seminars and attend regional and national meetings can expose students to others' work in broader areas, provide important networking opportunities, and make them aware of unpublished work in the discipline. A requirement to give presentations at local and national meetings provides valuable communication skills and exposes them to potential employment opportunities. Below, I have summarized some of the best practices and some of the challenges.

Best Practices

There are many caring professors and departmental administrators who consider mentoring of graduate students as an important part of their responsibilities and want to see their students succeed and get good solid training. There are formal guidelines for curriculum available, including core courses and lists of courses that are optional. Advisors and graduate program directors select strong program committees with relevant experience keeping in mind the needs of the graduate student, and such committees are appointed early – definitely within two semesters. Such committees meet early and finalize the program of study early. Students meet at least once a year with their program committee and their progress is formally evaluated by the program committee. Students are strongly encouraged to attend and actively participate in journal clubs and seminars. They are encouraged to give seminars once a year to twice a year. They are encouraged to attend regional and national scientific meetings and to compete in national and regional graduate student paper competitions for which they receive critique and preparation. They get exposure to participation in interdisciplinary programs. They are required to participate in teaching at least one semester. The exposure to laboratory and/or lecture adds to their résumé and marketability. Graduate students are required to prepare a grant proposal for a major funding agency for which they receive ample mentoring, including the opportunity to participate in a formal grantsmanship seminar. At the University of Nebraska – Lincoln, we offer an opportunity for advanced graduate students to participate in a

one-and-a-half day grant-writing seminar, which has been well received. Some institutions and programs require rotation of graduate students during their first one to two semesters through multiple laboratories in which they learn various research methods and approaches. Such a rotation provides them with an opportunity to select a major professor and a research program that has a right fit for them.

Challenges

In an ideal world, all graduate students who are well qualified, dedicated and are in areas commensurate with their education will graduate in a reasonable time. However, the reality is that as graduate deans we deal with too many situations where graduate students take way too long to complete their Ph.D. Major reasons for delays are lack of initiative by the graduate students and mentors in appointment of program-of-study committees, delays in formalizing a program of study, lack of mentoring and direction by major professors and program of study committee.

Veterinary Medicine

Being a veterinarian, I was asked to discuss the current state of graduate education in veterinary colleges. There is currently a shortage of veterinarians pursuing Ph.D.s. There is a tremendous demand for veterinarians trained in comparative medicine and biomedical sciences. This demand is for positions in academic institutions, government positions, and the corporate sector. The major reason for such a shortage is that veterinary medical education is very expensive and fresh veterinary graduates leave college with \$70,000 to over \$100,000 in debt. Of course graduate student stipends are generally not high enough to attract veterinarians. There are a number of alternative models in place or emerging to encourage programs offering a combined D.V.M./Ph.D. in 6-7 years. Because of training in whole animal biology, veterinarians with the Ph.D. are in a high demand and additional training can be financially rewarding in the long term.

What Can Graduate Deans Do about It?

Graduate deans are in a unique position to advocate for an environment that is supportive of good training and in which best practices are being followed. They can provide leadership in educating the graduate faculty about the best practices available in various disciplines as well as by setting high standards. They can require standard operating procedures with written guidelines, standard operating procedures and expectations for students, advisors and the graduate program advisors.

Establishing a requirement for annual review of graduate students puts pressure on all parties to make progress on their plan of work. Graduate deans can make sure that the quality of graduate committees is high and members understand their responsibilities.

Assessment of graduate programs, students' progress towards Ph.D., and time to completion of degree should be undertaken. Graduate deans should attend from time to time graduate committee meetings and thesis research presentations to judge the quality of training provided. Graduate deans should become proactive in developing new models for training research Ph.D.s. Many institutions have special awards for recognition of graduate advising. This is a great way of recognizing excellence and encouraging the right behavior.

Graduate Research in Allied Medical Health Fields and Research Master's Degree Programs

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Abstract

The role of research in applied fields at master's comprehensive institutions is to relate the study of scientific processes to models of clinical practice. Master's comprehensive institutions provide most of the education and clinical training in applied fields where a master's degree is required for entry into clinical practice and holds a primary responsibility for determining the efficacy of clinical applications typically referred to as assessment and treatment techniques or strategies. This paper will explore that role, explain the critical importance of that role, and demonstrate how diminishing the applied research capacity in an applied master's program reduces overall program quality. The paper will conclude with a description of successful strategies the Graduate School has used to build an applied research agenda at Eastern Illinois University.

Introduction

Rhodes (2001) suggested that the cornerstone of the master's degree is the relationship between master's scholarship and service to societal needs. Hamblin (2000), Kohl and LaPidus (2000), and Burgess (1997) offer historical evidence supporting Rhodes' view of the role of master's education and the discovery of solutions for practical problems, but it was the systematic study of the master's degree by Hayworth and Conrad (1997) that provided data to show that master's students engage in scholarship that creates a "community of learners." Such a community maximizes a student's appreciation for collaborating with colleagues to solve problems and seek solutions important to societal, public and professional needs. The purpose of this paper is to examine the role of research in applied fields such as speech-language pathology and audiology at master's institutions that focus on applied research degrees.

What is the Purpose of Research in Applied Allied Health Fields?

Discipline research in allied health professions such as speech-language pathology and audiology has two complementary and interdependent purposes. One is the scientific study of speech, language and hearing processes that provides the scientific bases to support clinical practice models. The second is clinical research related to the study of assessment and treatment techniques, prevention, treatment efficacy, treat-

ment outcomes, and documentation and scope of practice (ASHA, 2004). The mission of clinical research is to define models of best clinical practice. This is the mission of my institution, Eastern Illinois University. Successful master's programs include clinical research as an integral part of their mission to achieve the following goals:

- Graduation of professionals who can achieve the credentials required for clinical practice.
- Publication/presentation of original research with emphasis on applied research that bridges the gap between science and practice.

What Factors Impact the Productivity of Master's Candidates?

Factors that impact the productivity of master's research in allied health fields include securing scientists with the right mentoring skills, planning the research goals of the program, and developing a research culture:

- Faculty mentors who select careers at master's institutions require scientific preparation along a continuum from scientific bases through applied research that includes networking with both scientists and clinical practitioners. Preparation linking science to applied research reflects the expertise needed to foster and mentor an applied science agenda that creates the community of learners for master's candidates. Productivity for master's programs hinges on securing and retaining scientists with this continuum of scientific preparation
- A second factor essential to the productivity at master's institutions is creation of a cycle of planning. A cycle of planning includes creating goals for research productivity, assessing those goals, and refining the goals to increase the program's productivity, thus enhancing the culture of research. Planning includes developing cohorts of undergraduate researchers who receive early training in basic research methods. These graduates are prepared for master's research. Planning includes development of funding sources to support projects, mechanisms to present work, and venues for recognition of exemplary work.
- A third factor that positively impacts master's research productivity is development of a culture of research within the program. Having clearly defined research tracks, having and requiring candidates to pursue institutional funding for projects, and providing recognition for projects promotes a culture of research across the span of the degree.

What Factors Impact Productivity Negatively?

Three critical factors reduce the productivity of master's institutions in applied fields. These include demands for professional coursework and clinical practice, issues related to workload and replacement of science faculty, and lack of resources to support a research culture:

- Demands to secure clinical credentials place a heavy emphasis on content courses and clinical practicum experiences. Master's institutions are typically judged by the candidates' ability to deliver clinical services and most master's programs literally live or die by their clinical practice reputations. There is constant pressure to expand and increase clinical knowledge and to provide continuing education to regional practitioners. Demands for courses and practica often suppress the pursuit of important lines of applied research. Candidates who are attracted to clinical practice may view the science of the professions as separate from its practice and consider research, independent study, and thesis as add-on requirements that detract from clinical expertise and extend time to degree rather than as experiences that strengthen the foundation for evidenced based professional practice.
- A second factor that erodes the culture of science in the program is the issue of replacing science faculty. When key science faculty are lost, replacing the science faculty may be delayed and temporary or adjunct professors may be used. Budget downturns like those we are currently experiencing in Illinois create an ideal environment for this type of erosion. During budgetary downturns, pressure to increase teaching and service loads can devastate a master's program's research productivity.
- A third deterrent to productivity is lack of or loss of resources that support a culture of research. These include maintenance of competitive assistantships, collaborative research awards, and travel grants for master's students and competitive internal awards, seed grants, and related financial support for faculty. These financial incentives provide the foundation to prepare undergraduates, establish lines of study and secure initial data that may be essential for external grant competition. There should be focused planning of the institution to foster its applied research mission by carefully focusing and investing in the activities that will support and enhance research communities.

What is Ideal Research Training?

For master's programs in speech pathology and audiology and related allied health fields, ideal research training is planned, mentored, and nurtured within a comprehensive and supportive culture.

- Ideal training begins with a well-planned undergraduate research experience that leads to a master's research project that can be completed within the same timeframe as the course of study of candidates in professional tracks. In these ideal situations, the program faculty will admit new candidates from a pool of qualified applicants who have the potential to meet the program's research productivity goals and who compose a new cohort of master's researchers that matches the program's ability to provide the mentoring needed to complete the projects. Planning to define the number of desired candidates,

assessment to determine if the program is meeting its research goals, and plans to move the research agenda forward are critical to master's productivity.

- Ideal research training will include mentoring from faculty with the expertise and commitment to lines of applied research appropriate to the program's mission. Collaboration with other scientists and with practitioners provides a network for candidates to secure effective guidance and access to research populations. Master's programs must have research mentors who have the continuum of research expertise and who are connected to networks of other scientists and practitioners to support applied projects that can be realistically completed within the time frame of a typical master's degree program.
- Ideal research training will include access to multiple forms of financial support and recognition of students and faculty engaged in the research agenda. In ideal situations, there is a continuum of resource support for students beginning with undergraduate research awards and extending to competitive assistantships to attract research candidates, institutional grants to support graduate projects, travel awards to support candidate presentations, and technology assistance when technology applications are essential to the projects.

What is Less Than Ideal?

At master's institutions, there are several less than ideal research training scenarios for master's programs in speech-language pathology and audiology.

- One less than ideal research environment for applied master's programs, and one that is the most difficult to avoid, occurs when teaching, practicum and service duties limit or eliminate research productivity. When research experiences are treated as additional hours of study, candidates preparing for clinical careers will not pursue master's research because the research will increase time to degree within the context of an already demanding program.
- The second less than ideal environment for master's productivity occurs when the program does not establish and regularly assess its research goals. When there is no plan, the program risks securing faculty who do not match the needs of master's institution and who may not be able to establish the undergraduate and graduate research programs that sustain a strong culture of research.
- Another less than ideal environment is lack or loss of a continuum of resources to support faculty and student research productivity. Resources are an essential part of a productive research agenda. Without access to assistantships, research grants, and travel stipends, candidates will not be able to sustain strong tracks of applied research.

What Can Graduate Deans Do?

- Graduate deans can provide the guidance needed to assist programs with developing their research plan and promote collaboration as an effective planning tool for productivity. Deans who actively engage in the program review process can provide models of research productivity, options of how to create cohorts of undergraduates with potential for master's research, expectations for the number of projects that a program should support, and provide incentives for collaboration. Creating institutional databases that track applicant pools, research productivity, project collaborations, and resource allocations to promote productivity can assist programs with establishing research goals and projected improvements in productivity.
- Graduate deans can be strong advocates for improving/preserving existing resources and establishing new resource streams. At Eastern, this includes allocating and securing new assistantships that directly support productivity, providing competitive research awards for research and travel stipends as incentives for productivity, and providing special initiative awards for unique and promising projects and collaborations that promote productivity. These awards provide the resources and incentives necessary to promote program productivity and are evidence of an institutional commitment to graduate productivity. At EIU a new revenue stream for assistantships was created following a series of meetings with the President. The President agreed to allocate 18 new awards from a special foundation program that he supports. This new category of assistantships, aptly called "Presidential Assistantships," provides a new level of support to attract young researchers to our programs.
- Graduate deans should seek venues to recognize and publicize the contributions of master's students to the profession. Highlighting student achievements in research at web sites and in traditional publications, and through special recognition functions, is important to meeting the research mission of the institution. A new program that we began about four years ago has given our master's candidates visibility with local legislators. Master's projects and selected undergraduate graduate projects are presented to state legislators during a special EIU student research focus day each spring. The candidates discuss the relationship of their work to the needs of the state of Illinois. This has been an effective way for legislators to learn how applied research improves the quality of life for the residents of Illinois.

Below are examples of some of some best practices that are allowing the Department of Communication Disorders & Sciences to achieve master's research productivity. I believe that these collaborations will lead to research consortia that were recently promoted by Ringel (2004) as a powerful model for supporting research productivity.

In 2002 a master's candidate in Communication Disorders and Sciences earned a

Graduate School Research/Creative Activity Award. These awards provide resources to conduct master's research and also require a partner agency to engage in the research. The project was designed to study speech-language pathology service delivery models in Illinois public schools.

- Upon completion, the thesis received the College of Science's Graduate Student Investigator Award.
- The project was accepted for presentation at the Annual Conference of the American Speech-Language-Hearing Association and the graduate student earned a Graduate School Travel Stipend to present the work.
- The student was invited to publish the paper in *Advance Magazine* where it received the "Best Articles of 2002" award.
- The student was invited to present the paper to ASHA's School Affairs Special Interest Division.
- The initial work established a comprehensive line of research that has generated a series of undergraduate and graduate projects that have successfully been funded and accepted for presentation at state and national conferences because the studies are helping public school speech-language pathologists select better models of treatment for managing speech-language disorders in schools.
- The original student took a professional position in the region and secured the support of her school to be a partner agency for the continuing line of research that was initiated with her 2002 study.

While I have highlighted speech pathology and audiology throughout this paper, I want to note that similar achievements were documented by a master's candidate in Biological Sciences, for a collaborative project with the Illinois Natural History Survey. The initial study focused on Illinois stream habitat fragmentation.

- The study was accepted for presentation at a national meeting.
- Upon completion of the degree, the candidate accepted a position with the Illinois Natural History Survey at the Lake Michigan Biological Station.
- He continues his research liaison activities with Eastern by securing the support of his agency to collaborate on a project focusing on aquatic ecology projects designed to improve management of the various Lake Michigan fisheries while concurrently improving the ecology of the lake.

Both of these projects serve as examples of how a graduate school can foster the culture of research important to applied programs.

A second model of collaboration that created a community of learners began as a network of discussion among faculty from EIU, two research institutions, and two other master's institutions. The result was a collaborative research project funded through the National Institutes of Health. The study focuses on predicting which children will outgrow their disorder and which will require long-term treatment. Predicting which 20% need services will significantly reduce costs and insure that services are directed to the children who will benefit from those services. While the grant provided assist-

antship support, there were opportunities for additional EIU participants. The Graduate School provided additional research assistantship support through a new program funded through the office of financial aid. Both candidates have projects that are being considered for presentation at a national conference and a manuscript for publication is in process. Having access to the additional funding sources increased the productivity of the program and has expanded the community of scholars. This project also offers opportunities for master's candidates to engage with faculty and students from other institutions.

A third model of collaboration that has been successful for the program in communication disorders and sciences at Eastern is a project that emerges from an internship site. EIU uses more than 70 internship sites in 13 states. A regional hospital that serves high-risk infants has partnered with EIU faculty and students to study a unique population of infants. The speech-language pathologist in the program has developed a new treatment approach that needs to be validated with an applied research model. EIU faculty and graduate candidates have designed the studies to determine if the new approach offers more efficient and effective treatment outcomes. The project has the support of an external granting agent and students participating in the project will be competitive for collaborative research grants. The studies have gained both national and international attention in both the speech-language pathology and medical communities. The experience gained by the candidates in the project is opening doors to specialized clinical practice that is gaining the attention of undergraduates who are interested in this specialization.

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The Best Outcome is a Successful Career: Roundtable Summary

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Abstract

The Friday morning session was divided into three parts. The first part included small group table discussions focused around prearranged questions. The second part consisted of formal presentations on what two universities, Iowa State University and the University of Illinois at Urbana-Champaign, are doing in the area of career preparation. The third and final part included a student perspective panel.

This report summarizes the results of the table discussions. Each table was provided with one of the following questions or question sets:

Table 1

- Should the mission of the graduate school include non-academic aspects of career preparation?
- If so, what preparation should be provided?
- If not, what is the proper scope of graduate school activities?

Table 2

- What are graduate student needs when it comes to non-academic aspects of career preparation?
- What activities does your school or college provide?
- What needs do you not address?

Table 3

- What should be the respective roles of the graduate school, the department/program, and “career services” offices in helping graduate students achieve successful careers?

Table 4

- How do graduate schools find the resources needed to provide more student help in career preparation?
- What are effective strategies for garnering increased support for career preparation activities?
- What existing activities, if any, should be given up in order to provide career preparation?

Table 5

- How do we accommodate different career preparation needs when we have limited resources?
- What are the career preparation needs shared by master's and Ph.D. students?
- What are the career preparation needs shared by students seeking careers in business and academia?
- What are the career preparation needs shared by traditional (on-campus) and non-traditional (part time) students?

Because the discussion questions were intentionally overlapping, the issues identified were not table specific and are organized here into nine points or principles.

- Principle 1: Graduate school missions should include career preparation; this function may be satisfied by the graduate college providing these services directly or by the graduate school arranging for key services to be provided by some other campus unit. Non-academic aspects of career preparation are important and some unit should take responsibility for them. Other units that may contribute are the career placement office, the teaching center, academic colleges and departments, or an office run by the graduate student organization. Career placement offices tend to be undergraduate oriented and/or focused on business students. College based services seem to work well in Engineering and Business colleges, but less well in less career focused colleges. An important point is that the problem may only be an acute one for Ph.D. students. This is because many [part time] master's students already have jobs and because existing campus services better serve master's students than Ph.D. students. Career help for Ph.D. students should focus on preparation, not placement. Because of this, career placement centers may not be the best source of help. Teaching centers are a possibility, but there should be close cooperation with the graduate school. Centrally provided services such as curriculum vitae preparation, mock interviews, and workshops on various topics can provide much needed help.
- Principle 2: The greatest need tends to be for Ph.D. students. There is a real need to increase student awareness of non-academic career opportunities, to increase awareness of valuable skills learned outside the classroom, and to educate students that they must be able to articulate these skills. Important skills may include the ability to work in teams, leadership, project management, ability to organize presentations, and the ability to integrate information.
- Principle 3: The point was made that faculty are expected to provide graduate students with career advice and preparation and that faculty are poorly trained in these areas. Most simply know what they did to find a job. When a student wants to follow a different path, faculty frequently provide poor advice.

- Principle 4: The graduate college should be a welcoming safe place for graduate students to come with questions and concerns about career options. Graduate school services should not duplicate services available in other offices. Many times the graduate school function is simply to point a student to the proper service provider. Some departments and academic colleges provide excellent guidance on career planning. Such services should be encouraged and built upon.
- Principle 5: Students should be encouraged to think of career alternatives; every student should have a “plan B.” Important skills to acquire are grant writing, project management, and teamwork. Internships can provide students with a different perspective.
- Principle 6: The need for greater resources if the graduate school is to provide greater service generated several ideas. Generally it is necessary to convince the Provost and/or the President that the unmet needs of graduate students are a vital university interest. A practical way to garner new resources is to arrange for some or all of a fee increase to be devoted to a new service. In the absence of new funding, much can be done by partnering with departments, colleges, or other units on campus such as Career Services. An effective way to generate campus support for the needs of graduate students in career preparation is to hold a campus wide symposium on this subject, mixing students with departmental representatives.
- Principle 7: An effective program of career preparation needs to start at orientation. A thoughtful website can provide links and expertise to a wide audience.
- Principle 8: A general theme was that professional master’s students have very different needs than Ph.D. students and that providing effective service for professional master’s students is difficult for the graduate school. The University of Minnesota has 20 college based Career Services offices and the University of Illinois, Urbana-Champaign, has 26. In such an environment, the most important graduate school role may be simply to provide information about what services are available.
- Principle 9: Two important resources are corporations that regularly recruit on your campus and alumni from your programs. Both are usually willing to participate in workshops or career seminars if asked.

Establishing Career Services for Graduate Students at the University of Illinois at Urbana-Champaign

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Abstract

The University of Illinois at Urbana-Champaign has over 9200 graduate students pursuing degrees in more than 100 units. Following the investigation of a Graduate College appointed Career Advisory Committee, the Graduate College Career Services Office (GCCSO) was established in the fall of 2003 to serve as a centralized resource for graduate students from all disciplines. GCCSO services focus especially on the needs of graduate students in the humanities, social sciences, and fine and applied arts, areas not served by pre-existing career services offices on campus. During the past year, the GCCSO has successfully established a number of resources to support graduate student professional development, including a workshop series, a comprehensive website, individual advising, a centralized calendar of events, and an annual symposium. Students have responded enthusiastically, and individuals from all disciplines have sought support and information about both nonacademic and academic career planning. Expanded services are planned in the future.

History

During the 2002-2003 academic year, Graduate College Dean Richard Wheeler appointed a Career Advisory Committee to explore the career development needs of humanities, social sciences, and fine and applied arts graduate students at the University of Illinois, particularly as they related to nonacademic careers. The committee acknowledged that few resources were available to graduate students in these fields and recommended the establishment of a permanent office in the Graduate College to provide services primarily for this population, raising student awareness of transferable skills and career opportunities beyond academia.

The Graduate College Career Services Office (GCCSO) was established in the fall of 2003. Its mission is to serve as a centralized resource for graduate students from all disciplines, with services focused especially on the needs of graduate students in the humanities, social sciences, fine arts, and other areas in which students are not presently served by dedicated, discipline-based career services offices. GCCSO is one of twenty-six decentralized career services offices serving students at the University of Illinois. Two full time professional staff members staff the office.

Key Services for Students

The GCCSO has created a multitude of services to support graduate student professional development. These resources have been designed to be convenient and easily accessible to students, and they are structured in such a way that students can avail themselves to as much or as little as they need. Resources include

Website – www.grad.uiuc.edu/careerservices/

In the past year, GCCSO staff have developed comprehensive online resources in order to provide “self service” information for graduate students. Because of our limited staff and resources, we believe it is critical to provide students with concise, relevant information that they can easily access at their convenience. An information rich website with comprehensive sections on self assessment and career exploration, CVs, résumés, and both the academic and nonacademic job search process can answer many student questions anonymously.

Workshops

A comprehensive workshop series complements the information provided on the GCCSO Web site. We have established a core series of workshops that students can expect to be offered at least once each semester on an ongoing basis. The topics are broad and of general interest to students of all disciplines:

- Organizing Your Education for Options
- Transferable Skills
- Academic Job Search
- Nonacademic Job Search
- CV's and Cover Letters
- Résumés and Cover Letters
- Interviewing Skills
- Negotiation Skills and Job Offer Evaluation

Because of the overwhelming (and unexpected) response of science and engineering students in workshops piloted during the Spring 2003 semester, GCCSO now offers two sessions of most workshops: one tailored to Science, Technology, Engineering, and Mathematics (STEM) students, and a second to students in the Humanities, Arts, and Social Sciences (HASS). The student response to these workshops has been immensely positive, and more than 800 students attended GCCSO workshops during the 2003-2004 academic year.

In addition to the core workshop series, an ad hoc workshop on “Jobs in the U.S. Government” was also offered in conjunction with a Non-Profit and Government Career Fair co-sponsored by the Career Center (the student affairs-affiliated unit primarily serving undergraduates), the Office of Volunteer Programs, and the GCCSO. Additional ad hoc workshops on diverse topics like publishing journal articles, careers in publishing, and exploring international careers are planned for the future.

Individual advising

GCCSO staff members spend several hours each week in consultation with students. While the majority of students seek practical advice on résumé and CV development,

a number of students have sought more generalized career advice from GCCSO staff, often confiding ambivalence about careers in academe. Students frequently indicate that their graduate departments seem indifferent or even antagonistic to students considering nonacademic careers. One history student stated, "It took me six months to bring myself to come here," then anxiously blurted, "This is confidential, isn't it?"

The stimulating – and sometimes intimidating – intellectual environment at an institution like the University of Illinois can prohibit graduate students from recognizing their own considerable intellectual abilities and skills. Numerous students – especially in the humanities – express concerns such as, "I can't do anything else," or "I have no practical skills." Many students require guidance to help them recognize their transferable skills and to identify viable career opportunities outside academe.

As of April 2004, the GCCSO had served 148 unique students in more than 300 advising sessions during the 2003-2004 academic year. The majority of these students were from the humanities and social sciences.

Bi-weekly electronic newsletter

The GCCSO prepares a bi-weekly electronic newsletter to inform graduate students, faculty, and staff about upcoming events and workshops. This newsletter, available to anyone at the University of Illinois, had more than 500 subscribers in April 2004.

It provides a direct means for us to publicize events and bring relevant information to graduate students. The newsletter provides links to interesting career-related articles, highlights various career options, and occasionally posts job openings and fellowships. Archived copies of past newsletters are available at www.grad.uiuc.edu/CareerServices/ElectronicNewsletter/ElectronicNewsletter.html.

Master Calendar of Graduate Student Events

One of the frustrations frequently expressed by students is the difficulty in obtaining information about programs or events that might be of interest to them. For this reason, an effort has been made to assemble programs, workshops, and events for graduate students into a single site, now available at www.grad.uiuc.edu/MasterCalendar.htm. This calendar lists Graduate College events related to graduate student professional development, as well as relevant workshops sponsored by other campus organizations, such as the Center for Teaching Excellence (CTE). Student feedback has been overwhelmingly positive, and other campus units anecdotally credit higher turnout at their workshops due to this promotional effort.

Annual Symposium on Graduate Education

The Graduate College now hosts an annual event to facilitate discussion about issues relevant to graduate education, and the GCCSO plans and coordinates this event.

The second annual Symposium on Graduate Education, entitled *Challenges, Choices, Careers*, was held on Tuesday, February 10, 2004. Dr. Maresi Nerad, Director of the Center for Innovation and Research in Graduate Education and co-author of the *PhDs—Ten Years Later* study, served as keynote speaker, remarking on the diverse career trajectories of graduate students. Several smaller sessions were held, and faculty, staff, and alumni panelists discussed the personal and professional challenges of graduate education and professional life. Specific topics included the

transitions of academic life from graduate school through tenure, transferable skills, and the challenges facing dual career couples in today's academic job market. More than 200 students, faculty, and staff attended. Detailed program information is available at www.grad.uiuc.edu/CareerServices/Symposium/SymposiumHome.html.

Who Are the Students Using GCCSO Services?

The initial goal of the GCCSO was to serve students in the humanities, social sciences, and arts. However, after piloting our first few workshops, we quickly realized that students from all disciplines were seeking advice and guidance – on both nonacademic and academic career matters.

While a majority of our students come from the humanities, arts, and social sciences, 30% of the students attending workshops and seeking one-on-one advice come from the College of Engineering. The response of students from STEM disciplines was unexpected, primarily because discipline-specific career services offices were already in place to serve many of these students.

While we anticipated that most students would approach the office for support with the job search outside academe, we instead found that as many as 30% of the students using GCCSO services were seeking information and guidance for their academic job search. This came as a surprise, as we had assumed that students were receiving the information and support they needed for the academic job search from their departments. In order to manage this demand, GCCSO staff expanded online materials related to the academic job search process.

What's Next?

Now that core services have been established for Illinois graduate students, the GCCSO will work to identify student satisfaction with existing services and better determine what additional resources students would like to see in the future. We will do this through an online student satisfaction survey, administered in late April 2004. Focus groups are anticipated in the summer or fall.

We will be increasing our outreach to new students, particularly through the introduction of a new graduate student information fair and welcome ceremony in the Fall. The core workshop series will continue to be presented each semester, and additional ad hoc workshops will be offered on a variety of other topics.

We will also be increasing our contact with directors of graduate study (DGS's), to better understand what students need, to help spread the word about our services, and to encourage and help facilitate programs within departments that will serve students. We will be facilitating a "best practices" event for DGS's in the fall, in which faculty members from a department with comprehensive services to support the academic job search will share their planning and programming ideas with other units.

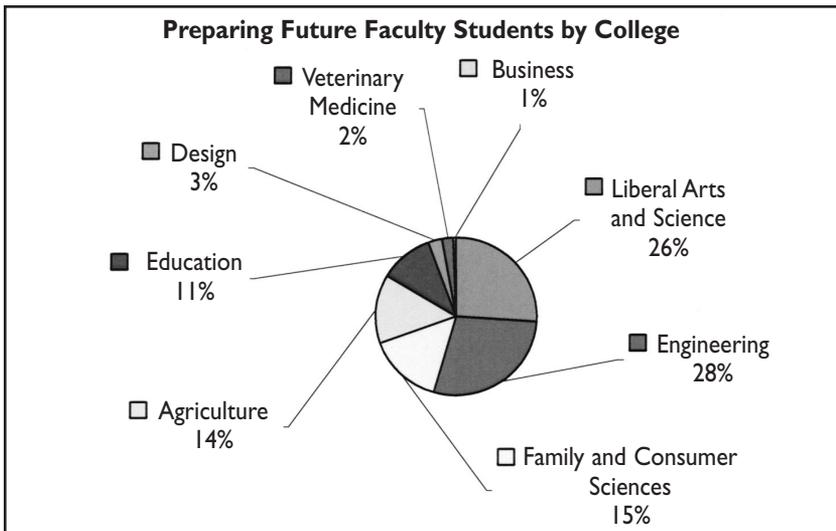
Successful Careers through Preparing Future Faculty at Iowa State University

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Background

The Preparing Future Faculty (PFF) program at Iowa State University supplements departmental graduate preparation by offering new teaching, mentoring, and learning possibilities which give postdoctoral fellows, Ph.D. students, and master's students further credentialing for a competitive academic job market. PFF's goal is to better prepare graduates for faculty careers through a combination of seminars, mentoring, and practical classroom and departmental service experiences.

PFF is a national movement sponsored by the Association of American Colleges and Universities and the Council of Graduate Schools. Iowa State University's program began in fall of 2001 and grew rapidly. In academic year '03-'04 it included 132 students from master's students through postdoctoral fellows, 230 faculty, 51 departments or programs at ISU, eight partner institutions, and four graduate courses. The majority of our users are engineering and science Ph.D.s, the group predicted by outsiders to be least likely to use PFF since they had the options of non-academic research careers.



Components of ISU's PFF Program

The supplemental training offered by PFF provides further credentialing for a competitive job market through four cornerstones of the program:

- individual faculty mentoring with a faculty member who supplements the major professor
- insight into faculty life at a variety of institutions, including liberal arts colleges, regional universities, and community colleges
- enhanced teaching and networking opportunities, including with partner institutions
- seminars on specific topics such as the job search, ethics, grant writing, and intellectual property

The bulk of the knowledge about specific topics and insight into faculty life is presented in four graduate courses offered through the Graduate College:

- Gr St 585. Preparing Future Faculty Introductory Seminar. 1 credit. Introduction to faculty life issues such as hiring, tenure, teaching, and service at a variety of higher education institutions. Includes presentations from faculty at other institutions.
- Gr St 586. Preparing Future Faculty Intermediate Seminar. 3 credits. Consideration of a wide range of faculty life issues. Includes topics such as higher education trends, diversity issues, learning styles, assessment, grant and proposal writing, and legal and ethical issues. Written components include job and teaching portfolios.
- Gr St 587. Preparing Future Faculty Teaching Practicum. 1-3 credits. Students complete a quarter- or semester-long stand-alone teaching assignment at Iowa State or another higher education institution.
- Gr St 588. Preparing Future Faculty Special Topics. 1-3 credits. In-depth study of topic providing academic professional development.

The first two courses are meant to be taken in sequence; the third and fourth courses can be taken with the second course. Students may leave the program at any time; it is not uncommon for them to step out of the program for one or two semesters to finish academic goals.

Topics for the first course are

- Inter-institutional Panel: What is faculty life like? The balance of research, teaching, service, and personal life
- Inter-institutional Panel: Hiring new faculty – What do deans and chairs look for
- New Faculty Panel: How I got started/What I wish I had known
- Inter-institutional Panel: Promotion and tenure – balancing teaching,

- research, and service
- When bad things happen to good people: Setbacks, perseverance and delayed success
- Choices: Returning to academia
- What's next? (an overview of advanced work in the PFF program)

Topics for the second course are

- Why I love being a professor
- Preparing course materials I: Course goals and objectives, syllabi, course policies, assignments, text selection
- Job letters and vitae
- Preparing course materials II: Tests, other assessments, grading rubrics
- Teaching portfolios
- Learning styles and their pedagogical strategies
- Lectures and their complements: Writing across the curriculum, active learning, leading discussions, technology, studio teaching
- Public speaking
- Diversity issues in higher education
- Career management: from hiring to retiring
- The role of service
- Grant and proposal writing
- Ethical issues in teaching and research
- Legal issues in teaching and research (intellectual property)

Career Help in PFF

Some of these topics, such as the seminar on job letters and vitae, obviously provide direct career help. Students hear experts speak on the difference between résumés and vitae, good and bad cover letters, good and bad interviews. They learn to search sources such as a school's web page and faculty manual for job information and potential fit. Students in the second PFF course submit a job package for a specific job ad; this package is critiqued by fellow students and graded by the course instructor. Young professors on the new faculty panel always talk about their job interviews; PFF students are avid listeners to tales of identifying the audience for the research seminar or preparing a list of equipment and chemicals needed to start one's own lab. Sadly, most PFF students agree that this is the first they have ever heard of such job preparation concepts.

Most of the faculty life materials also directly relate to careers. Professors and administrators from partner institutions offer vivid examples of the different balances of research, teaching, and service at a community college versus a liberal arts college versus a research extensive university. One young professor told of going to watch his students perform in sports, plays, and concerts. An administrator told of interviewing candidates to learn if they are willing to settle into a small school in a small town for thirty years. Some students learn that community colleges, small liberal arts colleges,

and research-intensive schools may offer most attractive careers. They hear how the hiring and tenure processes differ at different schools, or even in different departments of the same university. Every PFF class always has some students who did not know about the tenure clock; PFF directors from other institutions confirm this lack of knowledge in their own students.

Career help also comes from the individualized faculty mentoring of each PFF student. These faculty, who generally come from the student's department or program, provide opportunities for job shadowing, enhanced teaching opportunities (many let their mentee team teach an advanced course with them or deliver a few weeks of lectures in a large class), and discipline-specific input on job letters and vitae. Sometimes they engage their mentee in papers or conference presentations. Even when the student is not a co-contributor, he or she gets the invaluable experience of seeing how another professor, in addition to the major professor, approaches the dissemination of scholarship.

A final aspect of career help provided by PFF is credentialing. PFF offers its students program certificates, reference letters detailing the exact nature of their individualized work in the program, and transcript notations in addition to transcript course records. Students who complete two PFF courses are noted as PFF Associates; students who complete three become PFF Fellows; and students who complete all four courses become PFF Scholars.

Why PFF Career Help is Appreciated

Although Iowa State University, like most schools, has career placement offices, our Ph.D. students generally report receiving little help there. The staff in these offices usually do not have Ph.D. degrees and generally refer students back to their departments and major professors. Such referrals are not always successful. Major professors may be poor editors of job documents and sometimes don't even read them. Certainly in PFF we see numerous errors in job letters and vitae that our students tell us they have already sent out. In addition, a renowned researcher may no longer be knowledgeable about current job practices. Certainly many professors at research extensive universities are not knowledgeable about job requirements at different kinds of institutions. An engineering professor may advise students to write a two sentence job letter: I am applying for X job. My vita is enclosed. However, PFF panelists, some of whom are from the engineering college, point out that six students from the same lab, with remarkably similar vitae, are competing for the same jobs. How will schools know which one to interview unless the cover letter gives some help? Furthermore, competition and embarrassment may prevent students within that lab group or sometimes even within a department from asking questions of their professors. PFF provides a safe environment for asking such questions. In addition, good questions arise in group discussions that individuals would not have thought to ask. One such question that was highly valued by PFF participants this semester came from a humanities student who asked how to assess departmental culture on an interview trip.

In general, our PFF students seem stunned to hear how difficult faculty life has become. Sadly, our students seem to feel that most of us faculty are not nearly as hard working as graduate students. In PFF, we are always dealing with the myth that once the horrendous grind of graduate school produces the degree and job offer, then life will lighten up. When PFF speakers from all kinds of institutions speak of 60-80 hour weeks, our students are shocked. But they also hear us speak, even preach, about the joys of our careers, our passion for our disciplines, our love of teaching and research. This is the kind of balanced career help that PFF provides graduate students at Iowa State University.

“Hire Ed” in Higher Ed

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Abstract

For a Ph.D. candidate the prospect of embarking on a job search is both exciting and frightening. Many questions come to mind, including how best to construct a CV and cover letter and how to prepare for the first big interview. These issues, which should be addressed as part of a comprehensive graduate education, are often unclear to those entering the market; and career-related resources are not always readily accessible. This essay considers four areas in which graduate schools can offer guidance to students preparing for the job market.

The Scope of Graduate Education

The 60th Annual MAGS Meeting bears the title, “Back to Basics: Why Graduate Education?” An even more basic question might be, “What is graduate education?” It is taken for granted that the core of any Ph.D. program is one’s mastery of a specialized field of learning, but one’s careful navigation through the treacherous tumultuous waters of graduate school does not by any means ensure future success. Countless are the statistics explicating a very simple problem of supply and demand, namely that there are more people with Ph.D.s than there are academic job openings. What, then, are the responsibilities of graduate schools in seeking to mitigate this problem and how can universities prepare their students more fully for the dog-eat-dog world lurking on the other side of the dissertation? In this competitive job market the expectations of a graduate education must extend well beyond one’s own research and provide the student with the means to excel in the academic “afterlife.” To this end, I have identified four areas in which graduate programs might provide invaluable assistance to their students.

The Basics: Get ’em Right the First Time

When I once solicited information from a junior faculty member about landing an academic job, he responded, “I hate to tell you this, but a lot of it is just a crap shoot.” If that is the case, then job hunters must ask themselves, “How do we get *our* crap to rise to the top?” Even the most competent scholars may go unnoticed if they cannot

present themselves well to a search committee. The basics of any job search are the cover letter and CV, and they must be crafted with precision and care. Unfortunately, many graduate programs do not provide much guidance in constructing effectively these all-too-important documents.

The Graduate College Career Services Office (GCCSO) at the University of Illinois at Urbana-Champaign has been extremely active in its efforts to provide these much-needed services through private consultations and numerous workshops for graduate students. (A complete list of their activities can be found at www.grad.uiuc.edu/CareerServices). In this market, one cannot assume that there will always be a second chance to land the first big job. At best, the Ph.D., the highest degree in the field, is only a foot in the door. Much of what follows is a matter of marketing. The GCCSO at the University of Illinois provides a stellar model for helping students acquire the skills to get it right the first time. Such a resource could mean the difference between an interview and the infamous “we-had-many-qualified-applicants-and-you-weren’t-one-of-them” letter.

Discipline-Specific Career Preparation

While there are certain universal principles governing any job search, each discipline makes its own demands on those who dare to enter. The duties of a physicist are decidedly different from those of a concert violist or an art historian. Preparing for employment in one’s field, then, is a matter that should be addressed in consultation with those on the inside; and graduate colleges should seek to facilitate discipline-specific career programs across the university.

I have found faculty to be very receptive to the idea of offering lectures or informal question and answer sessions on the mysteries of the job search or the interview process. However, faculty are busy people. Various and sundry obligations pull them in various and sundry directions. As a result, they might not initiate career-related offerings, though they would entertain the possibility if persuaded by the students. Graduate colleges could offer valuable guidance in organizing such grass roots efforts. Faculty input on career matters is critical and must be a part of any comprehensive graduate program.

Graduate Students on Search Committees

Any teacher knows that there is no substitute for experience. Five minutes on the job is worth two years in a methods class. The same would likely be true of serving on a search committee where one can see first-hand how the process works from within. What is particularly appealing about the successful applicants? What are some of the common – and costly – errors of the unsuccessful? How do the faculty arrive at their decisions? Allowing graduate students to participate in the process can give them precious insight into the exotic ritual through which they must pass in order to land their jobs.

Honest Mentoring

Graduate school is a period unlike any other in the average student's intellectual development. Independence is encouraged to a greater extent than ever before as one learns to master the challenges of the chosen field. Ideas are created, tested, and reworked in collaboration with a faculty mentor, who presumably has the student's best interest in mind. The advisor-advisee relationship is a remarkably complex organism that can range anywhere from a happy partnership to activities that would get anyone booted off the Christmas card list.

The reality is that some students will not make it. Some do not deserve to make it and everybody knows it – except the poor, unsuspecting victim. Unfortunately – nay, tragically – they may be allowed to continue in the program long after their fate has been sealed. Some eventually just disappear. Some persevere long enough to receive a degree, only to realize that they cannot find anyone to speak positively on their behalf – the kiss of death in the job hunt.

Graduate school requires a tremendous commitment of time, energy, heart, and soul. Anyone prepared to dedicate a decade or so to the pursuit of a Ph.D. deserves honest and timely feedback from an academic advisor. If the truth hurts, tacit untruths will hurt even more. As students, we ask that you look out for us, guide us, and challenge us to excel in our quest to become your respected colleagues. Our fate is in your hands. Please do not take that responsibility lightly.

The Payoff

The best publicity for any university is the honest recommendations of its students. Those who have been given the means to succeed are likely to refer future generations to the same program. A well-rounded graduate education does not begin and end with the dissertation. Providing honest mentoring and the necessary career-service resources can enrich a student's chances for future success and can elevate the overall quality of the graduate program immeasurably. The students and the university should expect nothing less.

Overview of Workshops

The 2004 MAGS Meeting included the following four workshops:

Workshop 1 – Breaking Down Barriers for the Non-Traditional Graduate Student

Speakers: Carole Beere, Northern Kentucky University
Edie Raleigh, Madonna University
Judith Walker de Felix, University of Missouri – St. Louis

The demographics of graduate students are changing to include more non-traditional, part-time students. This workshop explored issues related to the “adult learner,” how to better meet their needs, and how to maximize their success.

Beere, Raleigh, and Walker de Felix provided a paper on the workshop topic.

Workshop 2 – Student Support Issues

Facilitator: Peter Diffley, University of Notre Dame

Support services are essential for graduate student success. This workshop examined support services and issues surrounding them: competitive stipends, allocation of funds, the interface between the graduate school and financial aid office, medical insurance eligibility, and support services for dependents.

Diffley provided a summary of audience members’ perceptions of most pressing issues on their campuses and their approaches to dealing with these issues.

Workshop 3 – Student Crisis Management

Speakers: John Mayfield, Iowa State University
Amy Levant, University of Illinois at Chicago

All graduate schools deal with student crises. Successful resolution leads to retention and satisfied graduate students. Representatives of two institutions described approaches to dealing with student crises.

Mayfield and Levant provided papers summarizing their institutions’ experiences.

Workshop 4 – Graduate Student Leadership

Speakers: Robert E. Thach and Elaine Berland, Washington University in St. Louis

Panel: Jesse Nelson, Indiana University
Christina Linsenmeyer, Washington University in St. Louis
DeAunderia Bryant, University of Michigan

After a report on the first National Conference on Graduate Student leadership (sponsored by the Woodrow Wilson national Fellowship Foundation Responsive Ph.D. Initiative at Washington University in St. Louis), discussion focused on what graduate students think are the key issues in graduate education.

The speakers and panelists prepared a summary of the questions addressed in the workshop.

Breaking Down the Barriers for the Nontraditional “Adult” Graduate Student

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Workshop Scope

The purpose of this session was to provide information about perceived barriers to graduate education by the “nontraditional” part-time student and to share barrier-reducing practices of the three institutions.

Background

Panel: Experiences in three distinct university settings

- Northern Kentucky: about 1,300 (mostly part-time) master’s students; this represents a 37% increase in enrollments in less than three years. Master’s degrees are overwhelmingly tied to career opportunities. Most students are juggling family, career and school without much support from graduate assistantships.
- Madonna: 1,288 almost entirely part-time (93%) master’s students of whom 75% are women. Most of them are also juggling full-time employment and family responsibilities. The University conducts its daily business to meet the needs of these students.
- Missouri-St Louis: 2,203 master’s and 436 doctoral students, of whom 79% are part-time and 67% are women. There has been an 11% increase in

master's students and 18% increase in doctoral students over the last three years, with fulltime men losing ground to other populations.

Enrollment Trends

Current enrollment trends indicate that the nontraditional graduate student is a growing phenomenon. The percentage of master's degrees has increased by 39% in the last decade while bachelor's and doctoral degrees increased 14%, making the master's degree the fastest growing postsecondary credential. In addition, students over 40 years of age are rapidly increasing as a proportion of the total enrollment. With this rapidly changing demographic, students over 40 are the key factor driving innovative approaches to post-secondary education and training (The Education Resources Institute, 1996).

Characteristics of the Nontraditional Student

The characteristics of the nontraditional graduate student may be extrapolated from those of the nontraditional undergraduate student. The key characteristics of nontraditional graduate students, however, relate to part-time school attendance and part- or full-time employment. The characteristics of the nontraditional undergraduate student were identified in the National Center for Educational Statistics study:

- Delayed enrollment into post-secondary education
- Attending part-time
- Financially independent
- Working full-time while enrolled
- Having dependents other than a spouse
- Being a single parent
- Not having a standard high school diploma
- (Horn & Carroll, 1996, pp. 3 – 7).

Learner Needs

What motivates the adult learner to return for a graduate degree? Although I (Carole) have not done empirical research to answer this question, I believe there are three major reasons why adult students return for a graduate degree: (a) They are seeking *career advancement*, either with their current employer or by preparing to move to a new employer; (b) They are seeking a *career change* either from one field to another, or from being out of the paid labor force to becoming part of the paid labor force; or (c) They are seeking *self satisfaction*, a category that encompasses a lot of circumstances. For example, someone may want to satisfy a lifelong dream to pursue learning in a particular discipline; someone may have recently retired and now has the time to return to school; someone may be unable or uninterested in working and may seek advanced education to stave off boredom. What follows focuses on the first two groups – those seeking career advancement or career change – because they com-

prise the majority of master's candidates, especially in professionally focused programs.

Adult learners are the majority of master's level students across the country. A recent article in the *CGS Communicator* (March, 2004) reported the following characteristics of master's degree students: their average age is 32.6; the majority are married and more than one third have at least one dependent; they are likely to be employed; and more than two thirds are part-time students. The master's degree is the terminal degree for most graduate students.

Adult graduate students are often presumed to be similar to nontraditional undergraduate students, and in fact, there are some similarities. Both groups struggle with the multiple demands of home, work, and school, and both probably have limited geographic mobility. In addition, both groups are likely to know what it is they want to learn, and both consider time to be one of their most valuable and scarcest resources. As a result, they do not want anyone to waste their time. This is a theme that comes up repeatedly in talking about or with adult students.

At the same time there are similarities, there are also important differences between adult undergraduate and graduate students. The adult graduate student is more likely to be sure of the direction he/she is taking, and hence, less likely to need help with life and career planning. Furthermore, by virtue of having a bachelor's degree, the adult graduate student is better educated and has a stronger foundation for learning than the typical adult undergraduate.

Although some adult graduate students enroll shortly after "nontraditionally" completing the bachelor's degree, most were traditional undergraduates who are returning to graduate school many years after completing the bachelor's. These students who have been out of school for many years may resemble first-generation college students in that they have little knowledge of the graduate student role and few people to help them navigate the process. They may know little about selecting and applying for graduate programs, and they have no faculty mentors available to assist in the process. They may have difficulty determining whom to ask for letters of recommendation, and they have little knowledge of the Graduate Record Examination. They may not realize that graduate education today is dramatically different from their undergraduate experience.

Adult graduate students may face challenges filling the student role. They expect to be treated with respect, do not want to waste their time, and do not suffer fools gladly. If they are juggling multiple roles, as most are, they cannot tolerate inefficiency or ineffectiveness. They bristle if what is being taught is outdated, and they want to be taught by faculty who clearly know more than the students know yet show respect for the students' knowledge. These students want an education that will help them to improve their working lives; that is, they want to learn, but they want to learn what is meaningful to them. Furthermore, adult graduate students are often very knowledgeable in their field, and this can be a threat to some faculty. These students quickly lose respect for faculty who know less than the students or who are unaware how the "real world" applies the discipline.

For these reasons, the two biggest needs of adult graduate students are convenience and quality. As indicated above, they are often juggling multiple roles; they may have careers that demand a great deal of their time; they may be raising young children and/or caring for aging parents. To accommodate these multiple demands and the time limitations that result from these multiple roles, they are seeking convenience. They want courses offered at times and in locations that are accessible for them. To achieve this, they are often willing to adapt to unconventional class times (e.g., all evening classes), innovative schedules (e.g., alternate week-ends), and new delivery methods (e.g., Internet-based classes).

To reach this student population, universities must find a way to provide the convenience. Unless prospective students can find programs that coordinate with their other time demands, they simply will not enroll.

While university faculty should give serious consideration to addressing this need for convenience, they must not alter the academic standards nor reduce the academic rigor of their programs. Unfortunately, because of the multiple demands on adult graduate students, they may feel unable or unwilling to invest the amount of time that is expected in graduate courses and hence pressure faculty to lower the course standards and requirements. Complying with this pressure harms former, current, and prospective students in a variety of ways.

To ensure quality in master's level education, one is advised to consult the work of Conrad, Haworth, and Millar (1993). In the late 1980's, Clifton Conrad and his colleagues at the University of Wisconsin conducted an intensive study of master's level education with particular focus on what leads to quality education. They conducted extensive interviews with administrators, faculty, graduate students, alumni, and employers of program graduates. After analyzing their interview data, they concluded that quality in master's education fell into six major categories:

- Program culture that includes a supportive environment and a shared purpose relating to the applicability of the learning experience;
- A planned learning experience that includes a core set of courses, immersion in the learning experience, emphasis on "learning by doing," individualized attention, and student involvement in the production of a tangible product;
- Adequate resources invested by the institution and the department;
- Strong faculty who are involved and committed to their discipline as well as to the program, and at least some faculty who have non-university work-place experience that enables them to bring real world perspectives into the classroom environment;
- Diverse students who are committed to their education; and

- Strong program leadership.

We recommend a full exploration of the findings of Conrad and his colleagues in their book, *The Silent Success* (Johns Hopkins, 1993).

Graduate Policies

Traditional policies and procedures produce the greatest frustration for the nontraditional graduate student. As stated previously, nontraditional students have little time and patience for policies that seem disrespectful of their maturity and independence. On the other hand, because they are juggling multiple roles and may be on campus for class attendance only, they may need additional reminders of the policies and procedures that exist. To best serve the education needs of the nontraditional student, it is important to determine what they are. While there are basic needs, there may be unique needs on a specific campus. Focus groups and surveys are the usual methods for gathering such data (Flint, Zakos, & Frey, 2002; Willits, 2002).

Policies Designed for the Nontraditional Graduate Student

The graduate program at Madonna University has served almost entirely nontraditional graduate students since its inception. While some policies may have begun in the model of the traditional student, it quickly became apparent that some changes needed to be made, and policies have readily been adapted to meet these needs where appropriate.

This group of students comes with work experience and often with expertise in some areas of study related to the degree. Also, most come with several years having elapsed since they earned their bachelor's degree. Because Madonna University is committed to quality education with a history of rendering public service through career education, students are carefully screened individually in person to determine their potential for academic success, even if their undergraduate experience was difficult.

Every master's applicant completes an admissions interview in the academic department to determine academic potential and to customize the program if needed. While no credit is given for prior learning, we accommodate flexibility in the plan of work by allowing course waivers if an applicant demonstrates significant knowledge in a curricular area. Courses containing new knowledge areas are substituted.

Because these students have been out of school for several years, the GRE and GMAT have not proven to be useful tools in screening applicants. Most academic departments have stopped using these exams as an application requirement. Those that do use it a standardized exam require it only for students with an undergraduate grade point average (GPA) of less than 3.25. Students who have an undergraduate GPA of less than 3.0 yet demonstrate maturing life experiences are given an opportunity to

demonstrate potential for academic success with a conditional admission. The condition of the admission is maintaining a 3.0 GPA in the first nine semester hours of graduate course work.

Given that nontraditional graduate students are managing their multiple roles and responsibilities, they frequently make the decision to attend graduate school shortly before the semester begins, any semester! Most of the academic departments are able to offer rolling admissions to accommodate such last minute decision making. In addition, we offer the opportunity to register on a permit for up to six semester hours while completing the admission process. Permission to take classes does not guarantee admission. Another tradition that is difficult for the nontraditional graduate student is the orientation session. Most academic departments do not require an in-person orientation, and we are in the process of creating an on-line orientation.

Again, to accommodate busy schedules, there is no requirement to be enrolled in a minimum number of semester hours each semester, and continuous enrollment is optional. Students have a two-year grace period for enrollment lapse. Prior to the expiration of this grace period, students are alerted to the coming deadline and encouraged to register in order to avoid having to reapply when they return to complete the degree. We also have a liberal extension on the program-completion time limit for family and work issues. It follows that we have no final year residency requirement. While we have an academic forgiveness policy for undergraduate students, we have not found a need for a similar graduate policy, but this might be an area for some schools to consider.

To accommodate work policies, some prerequisite material is packaged at the graduate level. These courses cover prerequisite material in a format that imparts the necessary information in a manner and speed that is appropriate for the graduate student, and the courses are given graduate level numbers to meet the requirements for employer reimbursement benefits and other financial aid requirements. To accommodate work schedules, classes are offered evenings, weekends, and on-line.

There is a fine line to walk between offering policies to accommodate the nontraditional student and maintaining the integrity of the program. Because we have mostly nontraditional students, our policies have adapted. This may not be the case in an institution that has a small population of nontraditional students. I believe that in our case, because we are relatively small and adaptable, and because we have a mission to serve the underserved, nontraditional students came in large numbers and we responded.

Services for Adult Learners

The changing populations in graduate programs might predict that universities would be adding new services to meet anticipated student needs. We found few published descriptions of how graduate programs are reacting to this transition. We wondered whether or not universities should offer different or additional support services to meet nontraditional students' needs. If so, what services produce the best results?

The Center for Adult and Experiential Learning (CAEL) has received funding to research this topic. One study that CAEL sponsored investigated practices at six institutions considered to be adult-friendly. Susan Mancuso (2000, 2002) determined that those institutions exhibited a pervasive adult-centered theme, leading to flexibility, individuation, and adult-centered learning that drove practice. Specifically, the following benchmarks were derived from practices at the selected institutions:

1. Institutions have clearly articulated missions that permeate the institution and inspire and direct practice.
2. Institutional decision making is a shared responsibility that uses collaborative processes inclusive of faculty, staff and students to create rapid, flexible responses to student and community needs.
3. Curriculum is designed to meet individual needs of adult learners.
4. The institution uses prior learning assessment programs to honor and credit the learning which adults have previously acquired and to help plan new learning.
5. Multiple methods of instructional delivery are provided to help adult learners meet their learning goals.
6. The teaching-learning process actively involves students in collaborative learning experiences typically centered around their lives and work.
7. The institution uses an inclusive, non-competitive admissions process designed to determine the best educational match for the adult learner.
8. The institution engages adult learners in an on-going dialogue designed to assist learners to make informed educational planning decisions.
9. The institution makes student services easily accessible and convenient to adult learners through many venues.
10. Full-time faculty members perform a blended role which combines instruction, student services and administration.
11. The institution employs part-time/adjunct faculty to assure financial viability and uses them to enhance quality through their special expertise, connections to workplaces, and to deliver an accessible and flexible curriculum.
12. The institution uses technology to enrich one-on-one communication.
13. The institution makes continuous and deliberate efforts to ensure that its education remains affordable for adults while maintaining access and quality. (Mancuso, 2000. n.p.).

Interestingly, many of these items could be considered best practices for all students, especially items numbered 1, 5, 6, 8, 9, 12, and 13. However, at research universities faculty response to the other items would be predictably negative. Those recommendations, in fact, contradict many of the principles—or at least traditions – of competitive graduate programs at research universities.

CAEL also issued a statement of Principles of Effectiveness for Serving Adult Learners, based on Mancuso's and others' workresearch. Because they are more general, these ideality may be more broadly applied to institutions with graduate programs. The Principles include the following:

- Outreach: The institution conducts its outreach to adult learners by overcoming barriers of time, place, and tradition in order to create lifelong access to educational opportunities.
- Life & Career Planning: The institution addresses adult learners' life and career goals before or at the onset of enrollment in order to assess and align its capacities to help learners reach their goals.
- Financing: The institution promotes choice using an array of payment options for adult learners in order to expand equity and financial flexibility.
- Assessment of Learning Outcomes: The institution defines and assesses the knowledge, skills, and competencies acquired by adult learners both from the curriculum and from life-work experience in order to assign credit and confer degrees with rigor.
- Teaching-Learning Process: The institution's faculty uses multiple methods of instruction (including experiential and problem-based methods) for adult learners in order to connect curricular concepts to useful knowledge and skills.
- Student Support Systems: The institution assists adult learners using comprehensive academic and student support systems in order to enhance students' capacities to become self-directed, lifelong learners.
- Technology: The institution uses information technology to provide relevant and timely information and to enhance the learning experience.
- Strategic Partnerships: The institution engages in strategic relationships, partnerships, and collaborations with employers and other organizations in order to develop and improve educational opportunities for adult learners (CAEL, 2002, n. p.).

CAEL's Principles generally correspond to the practices that we have adopted to serve adult graduate students at institutions where we have worked. Some of these are

1. Minimize driving to campus.
 - Hold open house/registration nights at extension centers for on the spot advising, registration, financial aid, student accounts, and a workshop on success in on-line courses.
 - Provide on-site or on-line purchase of texts and deliver them prior to or at the first class to extension centers or by mail.
 - Conduct business by FAX, e-mail, and phone, with campus staff delivering paper materials on campus.
 - Develop an on-line general student orientation and hold registration on line or by phone.
 - Develop a plan for electronic submission and publishing dissertations and theses.
2. Make trips to campus convenient.
 - Hold classes one-day a week, typically 4-7 PM and 7-10 PM or on weekends.

- Maintain bookstore hours to complement class times.
 - Offer eight-week sessions so part-time students can concentrate on one course per term.
 - Keep the graduate offices open in the evening, on Saturdays, and during winter break.
3. Encourage communication and integration into campus life.
- Direct staff to assume the-buck-stops-here philosophy to solve problems and reduce runaround.
 - E-mail newsletters to remind students or applicants of upcoming deadlines.
 - Promote academic services such as the writing center, tutoring, and disability assistance.

Despite good intentions and similar attempts on most campuses, the graduate student population overall had changed more rapidly than most institutions' practices or research into which practices produce the best results. This is important because, while the CAEL projects provide necessary foundational research, we found no studies that demonstrate that universities that provide such services will produce successful adult learners in graduate programs. Neither does current literature offer administrators any guidance about which services are essential and which might be optional. Knowing which services produce the best results is critical to maximize the investment of administrative funds.

An additional challenge to change comes from the reality that graduate programs are run by faculty in particular disciplines. They Faculty are not likely to concern themselves with research literature on higher education practices. Instead, experience suggests that most change in universities comes from responses to external forces. Decisions from lawsuits, state budgets, and accrediting bodies have generally played a larger role in forcing change than have the decision makers inside the university. Without such powerful external advocates, will universities provide services that adult learners need, even if they have willing graduate deans?

To make matters more complex for willing deans, the higher education literature frequently warns that universities should be changing to meet new competition. As Swail (2002) summarized, "New players, new pedagogies, and new paradigms are redefining higher education. The rules are changing and there is increased pressure on institutions of higher education to evolve, adapt, or desist" (p. 1).

In a plenary speech at the Council of Graduate Schools' 2003 Annual Meeting, Hawkins contended that innovations in information technology (IT) are driving much of that competition. While universities have traditionally controlled information with deadlines, intellectual property rules, tuition, bandwidth, budgets, and faculty reward systems, information can no longer be controlled, thanks to the Internet. Now IT has changed definitions of courses, credit (i.e., seat time), colleagues, and campus. Technology is transforming relationships between faculty members and graduate students. The traditional university role of controlling who teaches what and when to

whom is challenged as new competitors offer access and choices – issues especially important to adult learners.

While Hawkins (2003) warned that changes are necessary, he also noted that IT might be the external force that progressive deans can use to effect change. IT alters daily performance, which leads to transformative change. The goal of that change is greater access, which is also the goal most associated with new student populations.

Because the changes related to IT often occur at the individual, daily level, they may be haphazard and difficult to document. When faculty of an MBA program, for example, found that they were losing potential students to programs without rigid admissions requirements, they became more flexible – not in written requirements but in the individual decisions they made.

At the institutional level, the Internet has changed graduate programs, and the new services have been especially advantageous for busy adult learners. However, making graduate programs more accessible is beneficial for all students, not just adult learners. And in many institutions, faculty have also benefited from these innovations.

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Student Support Issues Workshop Summary

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Rather than having invited speakers, this workshop invited members of the audience to present pressing issues on their campus and to describe their approaches to dealing with these issues.

The topic that generated the most discussion in both sessions was student health insurance. It was noted that ten years ago fewer than 20% of schools supplemented (or paid in full) student health insurance premiums. Today, the payment of student health insurance approaches 40% and in the near future will go from an attractive recruiting device to a necessary part of the package. Next, pressure will be added to increase the basic policy coverage to include vision and dentistry. Once full coverage of students is achieved, the next battle will be over student *dependent* medical insurance. This is a very expensive endeavor because pregnancy, infancy, and young children constitute a far different demographic from the normal 22-32 year old adults that populate graduate schools. Universities may have less pressure to assume responsibility for student dependents if state and federal programs (e.g., Hoosier Healthwise, Medicare) provide service and coverage. Universities with medical and allied-health schools may have an advantage in providing less expensive/more extensive health insurance. The graduate school with its large contingent of potential exotic cases (e.g., international students) might interest dental and medical clinics enough to cut a deal.

Child day care and married student housing were also considered emerging issues. A few schools operate day care facilities that are open to students and faculty. Others formed groups of student families and provided space and equipment so that the interested parties could organize their own day care arrangements within the group. In both systems, liability reared its ugly head. The assembly agreed that the general counsel office should be taxed with protecting the system rather than working to eliminate childcare on campus.

The support of graduate student organizations was also addressed. In order for the organization to succeed, it must have a mission and the means. For instance, one graduate student organization uses student fees and graduate school money to run a travel grant program that supports students who are presenting their research at professional meetings. Others have graduate student officers serve on departmental and university committees.

Student Crisis Management: The Iowa State University Experience

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Abstract

Student crises arise for many reasons. Because the Graduate School is seen as a graduate-student-friendly place, many problems arrive on our doorsteps. Besides lending a receptive ear, what we do to help manage the crisis depends a lot on what formal services our campuses offer and what mechanisms are established to deal with grievances and real or perceived dangers. This paper summarizes how the system works at Iowa State University and comments on what features seem effective.

At Iowa State, the associate and assistant deans are always available to talk with students. It is important that these administrators know the appropriate channels to use in different situations. The figure illustrates various places that a student may engage the support system. The Graduate College is formally responsible for only a small portion of all support activities but plays a disproportionately large role because it is receptive to graduate student needs and is effective at directing students to the proper channels.

The formal role of the Graduate College is limited to specific grievances and to participation on the Critical Incident Response Team (CIRT). CIRT was constituted in 1994 in response to campus floods but spends relatively little time planning for potential campus disasters. Most CIRT time and energy is spent discussing individuals in the university community who constitute a potential (or perceived) threat to themselves or to others. In rare cases, the group restricts access to campus facilities or personnel. CIRT meets monthly and has representation from the Department of Public Safety, the Student Health Center, the Student Counseling Center, Student Housing, University Legal Services, the Dean of Students, the Graduate College, and the Provost. Other units may be called in as needed. Discussions of individuals who have come to the attention of any unit serve to alert various parts of the campus community, to assure the campus community that actions (if necessary) are being taken, and to coordinate possible actions.

Most student grievances do not come to the attention of CIRT but are handled through academic channels. The rules and expectations that apply to graduate students occur in four publications:

- Graduate College Handbook
- Department or Program Student Handbooks
- Student Disciplinary Regulations (Dean of Students)
- University Catalog

The Graduate College Handbook is probably the most important source of information for all graduate students. The handbook carefully spells out what grievances are permitted, what channels to use, what processes to follow, and what timelines to follow. The Iowa State University Graduate College Handbook is available on the web at <http://www.grad-college.iastate.edu/degree/graduatecollegehandbook.html> Student expectations and grievance procedures are discussed in chapter nine of the handbook.

Grievances are permitted in five categories:

- Claims of academic dishonesty in the classroom
- Claims of academic dishonesty in research
- Complaints about grades and instruction
- Dismissal from a graduate assistantship
- Dismissal from a program or failure of a preliminary or final examination.

All appeals begin with the department chair, and in all cases the Associate Dean of the Graduate College is available for informal consultation. These consultations frequently resolve or defuse situations that otherwise might fester. More often than not, the student simply needs to be heard or directed to the proper channel. If the appeal is not resolved at the departmental level, then the appeal route is dictated by the nature of the complaint:

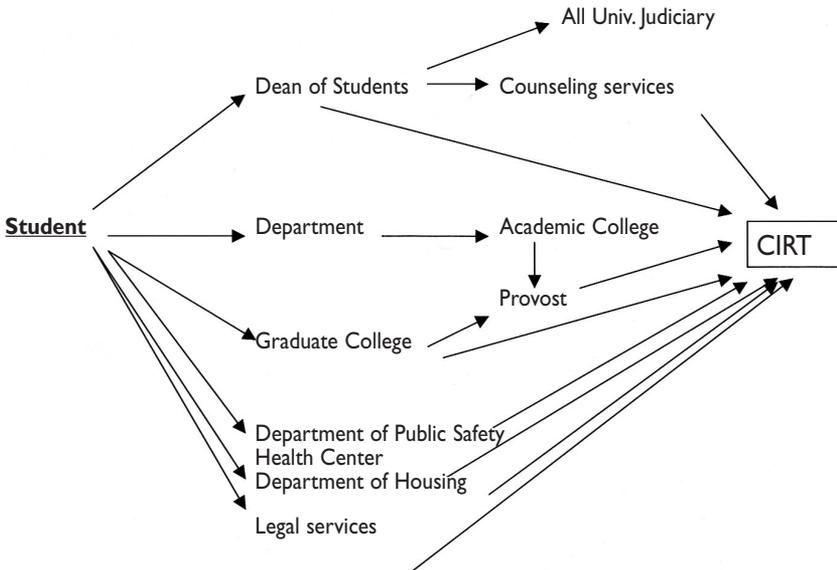
- Academic dishonesty in a classroom setting is referred to the All University Judiciary, a quasi-legal system run by the Dean of Students.
- Academic dishonesty in research is referred to the Officer for Research Standards (ORS) in the office of the Vice Provost for Research.
- Complaints about instruction are referred to the academic dean of the instructor's college.
- Dismissal from a graduate assistantship may be appealed to the Graduate Dean.
- Grievances related to [student] scholarly and professional competence are made to the Graduate Dean.

When a formal appeal comes to the Graduate Dean, the appeal must be made in writing and must be made in a timely manner. The Dean reviews the claims and the written history of the grievance and makes a ruling. In difficult cases or where additional research is needed, the dean appoints an *ad hoc* appeals committee consisting of students and faculty to review the grievance and recommend actions.

Major lessons learned from years of dealing with student problems and managing problem students are listed below:

- The Graduate College requires that all graduate programs have a graduate student handbook which spells out program requirements, expectations, and timelines. The implementation of this requirement has significantly reduced student grievances.
- The majority of “problem students” should have been previously dismissed from their program. Getting programs to establish fair standards and to enforce them early in student careers is the most effective mechanism for reducing troublesome appeals.
- A continuing challenge is to get programs to provide students with written notice that warns of deficiencies and provides time and mechanisms for remedying the situation. The Graduate College can play a major role in educating programs about the importance of this point.
- For all grievances concerning graduate students, Graduate College staff must be available to discuss grievances with students and/or faculty. Informal consultation with the Associate Dean of the Graduate College is very effective at resolving many grievances.

Figure
Student Crisis Management at Iowa State University



CIRT = “Critical Incident Response Team”

Managing Student Crisis

Amy Levant
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Abstract

Each day, graduate deans spend a portion of their time working to resolve student based conflicts or problems. Often, the problems are easy to solve, particularly those that are procedural. However, resolving conflicts that are systemic in nature requires significant time and attention. By systemic I am referring to problems and/ or conflicts that are chronic and structural. These conflicts are the most difficult to resolve and require research, negotiation, and a plan of action.

The session is designed to provide you with an understanding of the role of the Graduate College in managing disputes as well as strategies for resolving problems and/ or conflicts. While it seems that crisis management should be rooted in common sense, I have found that experience is actually the best teacher. As such, I have identified some key strategies for managing conflicts.

Managing Crisis

The Graduate College plays an important role in managing student crisis since it serves as the liaison between students and academic departments. As graduate deans we also serve as advocates for our students. It is in our best interest to find meaningful resolutions to conflicts and long-term solutions to systemic problems. To that end, I believe that there are some general principles that should be followed when resolving or managing crisis:

- Identify the real issue
- Research the issue and determine the key figures
- Keep an open mind and think before you act
- Consider all external factors (e.g., ethical, political, legal)

Thinking about ways to resolve a problem or manage a crisis should not be done in a vacuum. It is essential that the graduate college representative invite the participation of the line dean, department head and/or director of graduate studies in resolving the problem or crisis. Together they can determine an approach that will have positive results. If the Graduate College fails to include the appropriate academic unit, the best result will be short lived and it is also possible that the problem will simply go underground. To truly resolve a problem, the Graduate College needs to include all of the appropriate players.

Strategies to Manage Student Crisis

There are general strategies for managing crisis. While the seriousness of the situation may vary, there are some standard procedures that one should follow:

- Work with the line dean, department ahead and director of graduate studies to resolve the problem/conflict. Do not go it alone. The likelihood for success increases if the Graduate and line college work together.
- Define the problem and agree on the desired outcome.
- Develop a plan of action. The plan can include increased training, reassignment of a student, and mediation. The plan can also include more severe actions such as suspending admission to a program, reducing funds normally given to the unit, and revoking membership to the graduate faculty. Needless to say, the appropriateness of the plan of action corresponds to the seriousness of the particular event.

These general strategies are useful when trying to solve an immediate crisis. However, to secure long-term change, it is always best to be proactive rather than reactive. Consequently, I would like to propose the following strategies each designed to prevent crisis from occurring:

- Establish training opportunities. Training in areas such as sexual harassment, mentoring, teacher training, and a general information session for directors of graduate studies will minimize problems.
- Review existing policies and make sure that they are written clearly. Eliminate ambiguity and provide ample notification of any policy changes to both the students and faculty.
- If persistent problems occur in a particular area, a task force should be created to investigate the scope and nature of the problem and to make recommendations as to how to eliminate or manage the problem.

Conclusion

The phrase “one size fits all” is not appropriate when discussing ways to manage student crisis. In fact, effective management is a combination of knowing the available resources on campus (e.g., Legal Counsel, Office for Disability Services, Counseling Center) and including the key players in creating a plan of action. Most importantly, the person responsible for mediating the crisis must do his/her research and know exactly what the issue is and the relief required. Good judgment and knowledge of your campus are vital in trying to resolve or manage crisis. The best advice I have is to include as many people as appropriate in trying to create long term solutions. The best way to manage a crisis is to never get it in the first place!

Graduate Student Leadership

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Abstract

After a report on the first National Conference on Graduate Student leadership convened by Washington University in St. Louis with support from the Woodrow Wilson National Fellowship Foundation and the 14 participating Responsive Ph.D. universities, a panel discussion focused on what graduate students think are the key issues in graduate education.

Background

During the past decade the graduate education community has been engaged in a national conversation about the future of doctoral education and the role of Ph.D.s in society. In October 2003 Washington University in St. Louis, with support from the Woodrow Wilson National Fellowship Foundation Responsive Ph.D. Initiative, added an important graduate student voice to the on-going conversation, building upon prior initiatives including Re-envisioning the Ph.D., the Responsive Ph.D., and the National Association of Graduate-Professional Students (NAGPS). This workshop session addressed what graduate students think are the most perplexing challenges and promising practices in graduate education in the 21st century and how graduate student representation and leadership can partner with Graduate Schools to address these issues.

Questions

The panel focused on three questions:

1. What do graduate students think are the most perplexing challenges and promising practices in graduate education in the 21st century? Panel members identified and elaborated on the six key issues identified by the 42 graduate student delegates at National Conference:
 - Social Responsibility
 - Diversity
 - Career and Professional Development
 - Mentoring and Interdisciplinary Training
 - Graduate Student Community and Student Life
 - Governance and Graduate Student Representation

2. What have graduate students been doing to address issues? Graduate student panelists highlighted some of the post-conference outcomes and described examples of local follow-ups on their local campus. Audience discussion focused on the importance of graduate student representation and leadership and examples of promising practices on additional campuses.

3. What have we learned from the National Conference? What are implications for the future? Panel summarized the following key points from the Conference:
 - Target and cultivate graduate student involvement and leadership
 - Increase awareness of graduate student perspective on graduate issues
 - Build network of people and promising practices across peer institutions
 - Develop student-administration-faculty collaborations/ relations within institutions
 - Identify future challenges

Discussions focused on challenges and effective practices for cultivating graduate student involvement, representation, and leadership on various campuses, and what role the Graduate School offices can play to support student leaders' efforts to enhance graduate student experience.

Resources

For a copy of the Proceedings from the National Conference on Graduate Student Leadership 2003 and additional information:

National Conference on Graduate Student Leadership
www.artsci.wustl.edu/GSAS/ncgs12003

WWF Responsive Ph.D. Initiative www.woodrow.org/responsivephd/index.html

MAGS Committee Reports

Auditing Committee Report

We reviewed the statements of assets, income and distribution, including the state of investments of the Midwest Association of Graduate Schools, for the period covering March 1, 2003 to April 30, 2004. In our opinion, the financial statements present fairly, in all material respects, the financial position of the Midwest Association of Graduate Schools as of April 30, 2004.

Committee Members

Dennis L. Nunes, Chair, St. Cloud State University
Joseph Bast, University of Kansas Medical Center
Phillip Pope, Purdue University

Distinguished Master's Thesis Award Committee Report

On behalf of the Distinguished Master's Thesis Award Committee, I am pleased to present the report of the 2004 committee selection process.

For the 2004 award, there were 55 nominated theses. The theses were sent to the eight members of the selection committee for review at their respective institutions; manuscripts received multiple reviews. The quality of the manuscripts nominated was excellent; many received very high reviewer scores with comments that indicated high-quality work on the part of the students nominated.

In March, 2004, committee members discussed the reviewers' scores and comments for the highest rated manuscripts and selected the following recipients for the 2004 UMI/MAGS Distinguished Thesis Award and for the ParamGun Sood Distinguished Thesis award:

MAGS /UMI Distinguished Master's Thesis Awards

Laurel E. Griggs, "Development and Testing of a Coupled Heat and Moisture Transfer Model to Assess Subsurface Moisture Gradients," Washington University in St. Louis

Abstract. Current practical means of assessing moisture gradients in the relatively deep soil subsurface consist of methods that are labor-intensive, expensive, and inapplicable over widespread areas. This thesis explores the development and testing of a numerical technique to estimate subsurface moisture gradients over widespread areas from remotely sensed surface observations and knowledge of soil thermophysical properties. Such a technique would have important application in agriculture, soil science, meteorology, and hydrology.

To link fluctuations in temperature at the surface of the soil to moisture gradients in the subsurface, the coupled flow of heat and moisture in the unsaturated zone must be modeled. The model developed in this thesis differs from existing models in several key respects. By assuming a steady-state moisture profile fed by a saturated layer at some depth, the new model can theoretically produce estimates of deeper subsurface moisture gradients. Additionally, the model simulates the effects of topographic shadowing on the transport of heat and moisture.

Through testing of the model in the field and in a rooftop sandbox system, it was found that the model accurately reproduced observed

diurnal fluctuations in soil temperature when input parameters were adjusted within their calculated experimental uncertainties. Uncertainty analyses provided a valuable physical understanding of the interactions between unsaturated zone parameters in regulating subsurface moisture content and heat flow. Secondly, the analyses revealed that the moisture profile produced by the model is non-unique with respect to the combination of parameters (adjusted within the bounds of experimental uncertainty) employed as model inputs. This result highlights the necessity of highly precise input measurements in the determination of widespread subsurface soil moisture contents. With the current level of precision, the model can be successfully used to predict daily temperature fluctuations from a knowledge of subsurface moisture contents but not to perform the inverse problem.

Karen Elaine Laird, "(Un)Resolutions: The Case of Closure in Wilkie Collins's *The Woman in White*," University of Missouri-Columbia

Abstract. This thesis examines patterns of gender, sexuality, desire, and narrative authority in Wilkie Collins's *The Woman in White* to make sense of the novel's problematic ending, which has been ignored or inadequately dealt with by literary critics of sensation fiction. The author argues that the ending of *The Woman in White* reworks the complex triadic structure of three main characters competing for narrative and erotic power into a safe triangle, a substitution that speaks to how Collins both seems to contain erotic and narrative desire and complicate that containment. Chapter one chronicles the history of marriage as an end device in the English novel and argues that *The Woman in White* is structured as a class-based critique of marriage. Chapter two analyzes narrative structure by presenting a reading of the novel as editor Walter Hartright's masculine takeover of Marian Halcombe's and Count Fosco's feminine writing styles in order to achieve supreme authorial power. Chapter three provides a reading of Marian Halcombe as the character that instigates closure and offers a historical analysis of the "Surplus Woman" problem that faced England in the 1860's. By examining the relationship between the novel's three most dangerous characters, the author argues that Collins's seemingly conservative ending, when read closely, contains the seeds of its own subversion.

ParamGun Sood Thesis Award

Thomas C. Reich, "Higher Education in Vietnam: United States Agency for International Development Contract in Education, Wisconsin State University-Stevens Point and Republic of Vietnam," University of Wisconsin-Stevens Point

Abstract. This thesis explores an important but little known facet of America's war in Vietnam: the U.S. effort to reform the South Vietnamese system of higher education as part of the broader "nation-building" process in the fledgling Republic of Vietnam (RVN). Specifically it examines the interaction among Wisconsin State University-Stevens Point (now the University of Wisconsin-Stevens Point), the U.S. Agency for International Development (USAID), and the government of South Vietnam to implement change. The study is based on extensive research in manuscript materials relating to the education mission in the UW-Stevens Point Archives, on oral history interviews with key participants, and on a broad range of other primary and secondary works on Vietnamese history and education, U.S. foreign policy, and America's general effort to implement nation-building during the Cold War era.

After a brief introduction on literature and methodology, the thesis establishes a context for the U.S. mission by tracing the history of traditional education in Vietnam from ancient times to the 19th century, stressing the strong influence of Chinese Confucian models. Under French colonial rule in the 19th and 20th centuries, the French revamped higher education along European lines, but skewed it to produce a subordinate Vietnamese administrative class to support French dominance. U.S. involvement with Vietnamese higher education began with the Geneva Accords in 1954, which established an independent RVN, and the onset of the Second Indochina War. In order to bolster South Vietnamese resistance, USAID launched a multifaceted effort to develop education at all levels, contracting with American universities for advice and support. In 1967, USAID recruited President James H. Albertson of WSU-SP to head a group of educators, the original "Wisconsin Team," to survey and report on colleges and universities in the RVN. Albertson and other members of the team were killed in a plane crash near Da Nang in March, but other WSU-SP personnel completed the survey and later that year the university signed a contract umbrella with USAID and the South Vietnamese government to continue the collaboration.

This agreement launched a six-year program by which WSU-SP was the principal institutional adviser to the South Vietnamese system of higher education. On numerous occasions, the WSU-SP administrators visited the RVN, submitting detailed reports that suggested changes in curricula, faculty training, student relations, administration, and organization. Moreover, teams of leading South Vietnamese educators frequently visited the U.S., including extended stays on the WSU-SP campus. Not surprisingly, while emphasizing the importance of developing a Vietnamese blueprint, the thrust of the Wisconsin Team's advice was to restructure public higher education in the RVN on the model of the American state university system. The Vietnamese were impressed by the organizational structure at the institutional and state system levels. They detected a model for growth from the rapid expansion of American higher education, admiring the independent nature of American universities as campus units that afforded educators and students with most necessities. While motivated in part by institutional ambitions, Wisconsin Team members revealed a strong and sincere ideological commitment to exporting American educational values, improving their Vietnamese counterparts, and widening educational opportunities in the RVN. Although limited success occurred in some areas, such as university record-keeping and administration, wartime conditions inhibited broad changes, and the mission was eventually overwhelmed by events – the gradual withdrawal of U.S. forces, the “cease-fire” of 1973, the diminished funding for USAID contractual obligations in South Vietnam, and the collapse of the RVN during the North Vietnamese Spring Offensive of 1975.

In recent years, indications of the resiliency of mission objectives surfaced with the attempted renewal of educational relations on the part of Vietnamese educators from a unified Vietnam who visited Wisconsin-Stevens Point in 1998.

These recipients have written impressive theses that are a credit to them and to their institutions. The committee was pleased to make the awards official at the 2004 Midwestern Association of Graduate Schools spring meeting in St. Louis, Missouri.

Respectfully submitted,
Maria Di Stefano, Chair
Dean of Graduate Studies
Truman State University

Committee Members

Maria Di Stefano, Chair, Truman State University
Deborah Balogh, Ball State University
Robin Bowen, Rockhurst University
Tom Bragg, University of Nebraska-Omaha
Eleanor Buczala, University of Cincinnati
Max Caproni, Loyola University of Chicago
David Hilderbrand, South Dakota State University
David Wilson, Southern Illinois University-Carbondale

Membership Committee Report

The Membership Committee received inquiries about MAGS or requests for MAGS membership materials from several institutions during the past year. Oakland City University in Oakland, IN (Dr. Earlene Holland, Associate Provost) and Newman University in Wichita, KS (Dr. Michael Smith, Dean) submitted applications that were reviewed by the Membership Committee and recommended for approval in the past year. Both institutions are now new members of MAGS.

The Membership Committee for the past three years has included: Dr. David Crouse, University of Nebraska Medical Center (Chair); Dr. Dale Good, Walden University; Dr. James Van Keuren, Ashland University; and, Dr. Margaret Coxwell, Northern State University. We have enjoyed serving MAGS and look forward to facilitating the work of the new Membership Committee chaired by Dr. Marilyn Vogler, Michigan Technological University.

Respectfully submitted,

David A. Crouse, Ph.D.
MAGS Membership Committee Chair
2001-2004

2004 MAGS Member Institutions

Illinois

Bradley University
Chicago State University
Concordia University
DePaul University
Eastern Illinois University
Illinois Institute of Technology
Illinois State University
Institute for Clinical Social Work
Keller Graduate School of Management
Loyola University of Chicago/Loyola Medical Center
National-Louis University
Northeastern Illinois University
Northern Illinois University
Northwestern University
Roosevelt University
Rush University
Southern Illinois University at Carbondale
Southern Illinois University at Edwardsville
The University of Chicago
University of Illinois at Chicago
University of Illinois at Springfield
University of Illinois at Urbana-Champaign
Western Illinois University

Indiana

Anderson University
Ball State University
Butler University
Indiana State University
Indiana University
Oakland City University
Purdue University
Rose-Hulman Institute of Technology
University of Indianapolis
University of Notre Dame
University of Saint Francis
University of Southern Indiana

Iowa

Iowa State University
Maharishi University of Management
University of Iowa
University of Northern Iowa

Kansas

Baker University
Emporia State University
Fort Hays State University
Kansas State University
MidAmerica Nazarene University
Newman University
Pittsburg State University
University of Kansas
University of Kansas Medical Center
Wichita State University

Kentucky

Northern Kentucky University
Southern Baptist Theological Seminary
University of Kentucky

Michigan

Andrews University
Calvin College
Central Michigan University
Davenport University
Eastern Michigan University
Grand Valley State University
Kettering University
Madonna University
Michigan State University
Michigan Technological University
Northern Michigan University
Oakland University
University of Michigan
Wayne State University
Western Michigan University

Minnesota

Bemidji State University
College of St. Scholastica
Minnesota State University, Mankato
Mayo Graduate School
St. Cloud State University
Saint Mary's University
University of Minnesota Twin Cities
Walden University
Winona State University

Mississippi

Mississippi State University

Missouri

Central Missouri State University
 Drury University
 Northwest Missouri State University
 Rockhurst University
 Saint Louis University
 Southeast Missouri State University
 Southwest Missouri State University
 Truman State University
 University of Missouri - Columbia
 University of Missouri - Kansas City
 University of Missouri - St. Louis
 University of Missouri - Rolla
 Washington University in St. Louis
 Webster University

Nebraska

Chadron State College
 Creighton University
 Peru State College
 University of Nebraska-Lincoln
 University of Nebraska at Omaha
 University of Nebraska Medical Center
 University of Nebraska at Kearney

North Dakota

Minot State University
 North Dakota State University
 University of North Dakota

Ohio

Air Force Institute of Technology
 Ashland University
 Bowling Green State University
 Case Western Reserve University
 Cleveland State University
 Hebrew Union College - Jewish Institute of
 Religion
 John Carroll University
 Kent State University
 Medical College of Ohio
 Miami University
 Ohio University
 Notre Dame College of Ohio

The Ohio State University
 University of Akron
 University of Cincinnati
 University of Dayton
 University of Toledo
 Ursuline College
 Wright State University
 Xavier University
 Youngstown State University

Oklahoma

Cameron University
 Oklahoma State University
 Southeastern Oklahoma State University
 Southwestern Oklahoma State University
 University of Central Oklahoma
 University of Oklahoma
 University of Oklahoma Health Sciences
 Center
 University of Tulsa

South Dakota

Northern State University
 South Dakota School of Mines
 South Dakota State University
 University of South Dakota

Texas

Texas Tech University

Wisconsin

Concordia University
 Marquette University
 Sacred Heart School of Theology
 University of Wisconsin - Madison
 University of Wisconsin - Eau Claire
 University of Wisconsin - Green Bay
 University of Wisconsin - La Crosse
 University of Wisconsin - Milwaukee
 University of Wisconsin - Oshkosh
 University of Wisconsin - Platteville
 University of Wisconsin - River Falls
 University of Wisconsin - Stevens Point
 University of Wisconsin - Stout
 University of Wisconsin - Superior
 University of Wisconsin - Whitewater

Publication Committee Report

The primary charge of the Publication Committee is oversight of the preparation of the *Proceedings of the Midwestern Association of Graduate Schools*. Harry Berman is the current editor. During the past year, manuscripts were received from presenters at the April 22 – 25, 2003 meeting; these manuscripts were reviewed and edited, and the *Proceedings of the 60th Annual Meeting* were assembled.

With help from the Program Chair, the Publications Committee has more firmly established expectations that presenters provide copies of their papers to the *Proceedings* editor for publication.

Deborah Berman edited each of the papers in the 2003 *Proceedings*. The *Proceedings* were printed by the University of Illinois at Springfield's Printing/Duplicating Services office at a cost of \$2,323.00 for 300 copies (including shipping). The 2003 *Proceedings* volume was mailed to all attendees of the 2003 meeting, as well as to the dean of each member institution. An archival copy was sent to the Council of Graduate Schools office in Washington, DC, and a number of copies were given out at the 2004 meeting in St. Louis. The Chair of the Publications Committee is working with the MAGS Secretary/Treasurer to refine the distribution list. In the interest of having an even broader impact on graduate education, the *Proceedings* have been posted to the Southwest Missouri State University website at <http://associations.smsu.edu/mags/>.

Respectfully submitted,
Harry Berman, Chair
Associate Vice Chancellor for Graduate Education and Research
University of Illinois at Springfield

Committee Members

Harry Berman, Chair, University of Illinois-Springfield
Frank Einhellig, Southwest Missouri State University
George Green, University of Minnesota
Robert Augustine, Eastern Illinois University

MAGS Treasurer's Report FY 2003-2004

Period Covered - 07/01/03 to 11/30/03

ASSETS

(transferred from Merlin and closed account)	10,000.00
Second transfer	35,879.18
	45,879.18
Assets	45,879.18

REVENUE

Donation by Executive Committee (gift for Merlin and Carla)	100.00
Total Assets and Revenue	45,979.18

DISBURSEMENTS/EXPENSES

Reimbursement for Peter Diffley for MAGS gifts (Ck. #1001)	104.94
Reimbursement for Susanne Ortega for summer meeting travel (#1002)	86.40
Reimbursement for Maria DiStefano for 2003 Distinguished Thesis expenses (#1003)	287.30
Reimbursement for Richard Wheeler for summer meeting travel (#1004)	238.01
Reimbursement for Patrick Melia for summer meeting travel and renting facilities (#1005)	1,003.89
Reimbursement for John Mayfield for summer meeting travel (#1006)	372.34
Reimbursement for Peter Diffley for summer meeting travel (#1007)	575.49
UNB-L Annual Meeting postage and shipping (#1008)	562.84
Stationary Printing and postage for mailing stationery to Suzanne Ortega (#1009)	230.88
Reimbursement for Patrick Melia for mailing costs to send stationery to Suzanne Ortega (#1010)	15.00
	3,477.09
Total Expenses	3,477.09

TOTAL CURRENT ASSETS \$42,502.09

[signed]

April 16, 2004

PATRICK MELIA
SECRETARY/TREASURER

DATE

MAGS Treasurer's Report FY 2003-2004
Period Covered - 12/01/03 to 3/31/04

<u>ASSETS</u>	(12/18/03)	
	Checking Account	42,502.09
 <u>REVENUE</u>	(12/01/03 to 3/31/04)	
	Membership dues for 2004 (1/22)	2,775.00
	(including late 2003 Concordia University dues)	
	Membership dues for 2004 (1/26)	3,050.00
	Membership dues for 2004 (2/11)	3,625.00
	Membership dues for 2004 (2/25)	2,450.00
	Conference registration fees for 2004 (3/23)	7,850.00
	Dues, fees, etc. for 2004 (3/31)	7,550.00
	Interest (3/31)	76.11
		69,878.20
	Total Assets and Revenue	69,878.20

DISBURSEMENTS/EXPENSES

Reimbursement for Patrick Melia for MAGS breakfast at CGS national meeting in San Francisco (#1011-12/18)	291.65
Reimbursement for Peter Diffley for mailing and printing costs of election ballots (#1012-02/12)	77.76
University of Illinois-Springfield for 2003 MAGS Proceedings	1,893.75
Reimbursement for Patrick Melia for 2005 site visit to Kansas City Country Club Plaza Marriott hotel	112.54
	2,375.70
Total Expenses	2,375.70

TOTAL CURRENT ASSETS \$67,502.50

[signed]

April 16, 2004

 PATRICK MELIA
 SECRETARY/TREASURER

 DATE

Instructions to Contributors to the *Proceedings of the Midwestern Association of Graduate Schools*

Proceedings Editor

Harry J. Berman, Ph.D.
Associate Vice Chancellor for Graduate Education and Research
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Adherence to the submission schedule and instructions on how to submit your manuscript is essential to the timely publication and distribution of the *Proceedings of the Midwestern Association of Graduate Schools*. In addition, continuity in style and form are central to the appearance of any publication of articles. These guidelines have been developed to help achieve that goal of consistency and yet allow for freedom and presentation for the array of topics that constitutes the *Proceedings*.

The *Proceedings of the Midwestern Association of Graduate Schools* contains the text of presentations at the annual meeting, MAGS committee reports, summaries of small-group discussions, and other items of concern as appropriate to support the goals of the organization. Authors should be aware that the text of oral presentations may need some modifications for clear communication as a publication in the proceedings. They should revise the presentation to make it suitable for publication. The *Proceedings* does not act as a general publication outlet nor does it accept unsolicited manuscripts.

How to Submit Your Manuscript

Submission. Presenters should provide materials for publication to the following two people.

- Chairperson who organized and presided over the meeting section of the presentation (paper copy at the annual meeting, email attachment later)
- *Proceedings* editor (paper copy and email attachment)

Annual meeting committee reports and summaries of small-group discussions should be submitted (paper copy and e-mail attachment) directly to the *Proceedings* editor. Guidelines for small-group facilitators are provided as the last section of these instructions to contributors.

Format. Manuscripts should be in Microsoft Word format (.doc) or rich text format (.rtf). PowerPoint or similar presentations are not acceptable.

Review of the manuscripts. The Publication Committee assumes responsibility for editing *Proceedings* manuscripts. Under certain circumstances, the section chairperson will be asked to conduct a first review and editing and forward those comments to the *Proceedings* editor. The Publications Committee will then complete the review and editing process.

Time Table. Manuscripts of presentations should be presented to the section chair at the time of the annual meeting. Manuscripts and reports should be received by the editor no later than 30 days following the annual meeting.

Manuscript Preparation. This publication can serve as an example of how materials presented for publication should be prepared. However, the general guidelines are as follows:

- | | |
|-----------------------------|---|
| Title | Keep the title to a few key words, typically 10 or less. |
| Authorship | Provide your name, title, institution, address, and e-mail address. |
| Abstract | The first section should be an abstract of no more than 100 words |
| Line spacing | Single space. |
| Paragraphs | Double space between paragraphs; do not indent. |
| Headings | Use of headings is encouraged, but should not exceed two levels. Left justify headings and bold. |
| References/citations | <i>Chicago Manual of Style</i> documentation style. Your references must be complete; if not, you will be contacted to provide the missing information. The editor cannot complete your references or verify them for accuracy. |
| Length | Ten single-spaced pages is the maximum length anticipated. |
| Figures/artwork | Graphs/figures developed using Microsoft Office are acceptable. Otherwise, provide clean, camera-ready copies that can be photocopied directly into the <i>Proceedings</i> . |

Workshop Facilitators

The following guidelines apply to interactive meeting sections that are under the direction of a workshop facilitator, who is responsible for formulating key questions for discussion, moderating the discussion session, and providing a written summary for the *Proceedings*. After the title and authorship (facilitator), the manuscript presented to the *Proceedings* should start with a statement of the topic and a bulleted list of four to six questions that served as the focus of the discussion. These elements should be followed by a concise summary (250-500 words) inclusive of the salient points, comments, or questions that arose during the group discussion. If desired, references can be included in a standard reference list according to the format specified for other manuscripts in the *Proceedings*.