

GRADUATE SCHOOL BEYOND THE PH.D.: WHEN IS ENOUGH ENOUGH?

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1. INTRODUCTION

While they may not be immediately obvious, there are many excellent reasons to continue one's formal education even after a PhD is obtained. These reasons can be both professional and personal. Of course, along with these advantages come challenges that someone attempting to return to school while working full time should also consider.

Over the course of the past several years, each of the authors has worked on earning a Masters degree more or less full time. Each of these degrees was undertaken several years after the completion of their Doctorates, and each has been achieved while holding down full-time academic positions at Valparaiso University. The first author will complete a Master of Science in Transportation Engineering and Infrastructure Management from Purdue University in West Lafayette, Indiana in the spring of 2006, while the second author earned a Master of Business Administration degree from Valparaiso University in May of 2005,

After a brief discussion of the philosophy underlying a terminal degree, the authors will, based on their experiences, provide candid insight on the advantages and disadvantages of further education as a faculty member and will provide valuable guidance to increase the likelihood of success for those who desire to follow a similar path.

2. THE "TERMINAL" DEGREE: AN OBSOLETE PHILOSOPHY?

The idea of a "terminal" degree has become deeply embedded in the academic culture of our country and, indeed, of the world. (Brickman and Lehrer, 1962) The idea that those who have demonstrated the greatest ability to succeed as students should, immediately upon reaching the pinnacle of that ability, set aside formal education in exchange for self-study, seems to be accepted without question.

However, the world is a rapidly changing place, and it is just possible that this deeply held belief is in need of critical review. Consider the increasing importance of lifelong learning, both among engineers and those of other disciplines (Hesburgh, *et al.*, 1973; Houle, 1984; Smith, 1990; and Vermilye, 1974). Increasingly, adults are seen as an important educational audience, and one that must be addressed by all educational institutions (Cross, 1981; Merriam and Cunningham, 1989). The United States government has performed research to investigate the ability of professional workers to

also be part-time learners at the same time (Hunt, 1992), and researchers have investigated the particular differences between the learning styles preferred by traditional college-age students and non-traditional adult learners (Hayes 1989). The idea of “continuing higher education” has become commonplace on nearly all campuses, and non-traditional students are being actively recruited with lower tuition and a variety of other accommodations (Lerner and King, 1992; Pickering, 1985)

It seems, then, that adults are welcomed as learners in every career except academia. However, a little additional study shows that all the pieces are in place to promote additional graduate study beyond the Ph.D. A great deal of work has been done to investigate ways to enhance faculty careers, especially in the second half of those careers. Methods for professional development and renewal are especially important in a professional setting where unproductive employees cannot be easily fired. More importantly, in a collegial environment, we share a responsibility for each other’s professional success, and one way to do that is to encourage continuing education (Schuster and Wheeler, 1990). Sabbaticals are a long-established mechanism for reinvigorating academic excellence, although they are most frequently used to pursue scientific research or self-study (Stendahl, 1980; Zahorski, 1994). A more recent development has been the post-tenure review, which can be a very valuable tool when it is used in an environment that promotes trust and a mutual goal of maximizing the individual’s effectiveness as a faculty member (Alstete, 2000).

A great deal of work is being put into a critical review of the initial preparation of engineering educators (Sarason, 1993). It is possible that a similar review of post-tenure faculty professional development will break down the barriers preventing those with a doctorate from considering additional formal graduate work as a valid expression of their own professional development.

3. TWO EXPERIENCES BEYOND THE TERMINAL DEGREE

Between 2002 and 2006, the two co-authors each pursued and completed a graduate degree beyond the terminal Ph.D. required for their positions as engineering faculty. Although our experiences were quite different, each can help to illustrate the issues involved when deciding to pursue a graduate degree beyond the doctorate.

3.1. Earning a Master of Science in Civil Engineering Degree

The first author received his Master of Science and Ph.D. in Civil Engineering with an emphasis on Geotechnical Engineering from Virginia Polytechnic Institute and State University (a.k.a. Virginia Tech) in May of 1989 and December of 1999 respectively. In the fall of 2004, while teaching full-time at Valparaiso University, he began working on a second Masters degree in Civil Engineering with an emphasis on Transportation and Infrastructure Management at Purdue University in West Lafayette, Indiana. At the time of this writing (January 2006), he had completed 27 units of coursework and two units of a three-unit independent study project, leaving only the final unit of the project to be completed.

What would drive a relatively sane person to return to graduate school full-time, with almost no reduction of his own teaching responsibilities, commuting two to three times a week to a university 85 miles from his home, simply to pursue a Master's degree when he already possessed a Ph.D.? The answer to this question lies in the realities of teaching engineering in a small department.

The Civil Engineering department at Valparaiso University consists of five faculty members, but has recently lacked any faculty with formal training in the area of transportation engineering. One required survey course in transportation is taught at the sophomore level, but no elective courses in the area of transportation have been taught in at least the three years prior to the first author's undertaking. When one considers that approximately 30 percent of recent graduates have gone to work for either state departments of transportation or consulting firms that work primarily in the area of transportation, the need for a faculty member with formal training in this area becomes obvious. Unfortunately, due to budgetary constraints, hiring an additional faculty member was not an option, thus the first author decided to broaden his technical expertise to fill this gap.

In order to fund the endeavor, the first author applied for and received the Frederick F. Jenny Professorship of Emerging Technology. This two-year chaired position provided a \$5000 per year stipend as well as three load credits of release time each semester. In addition, he applied for and received a one-time \$1500 Faculty Development Award from the Valparaiso University Alumni Association. These funds were used to pay for fees, tuition, books, and a \$50/week fuel stipend.

During the fall 2004 semester the first author took six units (two classes and a zero-credit seminar) at Purdue and taught 15 units (two lecture courses and three laboratory sections) at Valparaiso. During the spring 2005 semester he took 12 units (four classes) at Purdue and taught 5 units (one lecture course and two units of advising a senior design team) at Valparaiso. During the fall 2005 semester he took 14 units (four classes, one of which was outside his plan of study, and two units of his independent study project) at Purdue, while again teaching 15 units (two lecture courses and three laboratory sections) at Valparaiso. He made the 190-mile round trip commute twice a week, three times a week, and twice a week respectively over the three semesters. Additionally, during the 2004-2005 academic year, he carried a significant portion of his department's Chair responsibility, substituting for the actual department chair, who was on sabbatical at the University of Minnesota.

3.2. Earning a Master of Business Administration Degree

The second author earned a Master of Business Administration (MBA) degree at Valparaiso University between August 2002 and May 2005. The first year of this program was completed while the author was on half-time sabbatical during the 2002-2003 academic year, while the second and third years of the program were completed while carrying a normal teaching and administrative load.

For students with a non-business undergraduate degree, the MBA program at Valparaiso requires 52 credits of study, considerably higher than the more typical 30 to 36 credits for a Master's degree in an engineering field. Because most of the courses were two credits each, this degree actually required the completion of 25 different courses in topics as diverse as accounting, finance, marketing, management, and statistics.

The author was not required to pay tuition for this program, because it was pursued at the same university where he worked. In addition, the commute was very short—just two hundred yards from the engineering building during the day to the business school for night classes.

However, being a teacher during the day and a student at night at the same university also led to some role confusion. In particular, when the MBA program needed a temporary instructor to fill in for a business professor on sabbatical, the author found himself as a student on Tuesday nights and a professor on Wednesday nights in the same classroom with the very same students. It took a great deal of effort to balance and separate those two roles.

Another challenge brought about by this arrangement was the sheer volume of work necessary to complete the program. Although many engineers consider business to be an easier subject than engineering, it is the author's opinion that taking 25 graduate business courses is an excellent way to dispel such a belief. Although it is true that the courses were frequently less mathematically demanding than a graduate engineering course, a typical semester could easily involve more than two thousand pages of reading and writing a cumulative total of fifty or more pages of term papers. These are not inferior skills to those required by engineering graduate work; they are just different skills. It was frequently difficult to complete this coursework at a high level of quality while also maintaining a similar high level of quality in teaching and administrative duties.

4. BENEFITS OF FORMALIZED CONTINUING EDUCATION

There are several advantages to continuing one's education beyond the doctoral level. These include, though are certainly not limited to:

- Broadening of academic expertise and improved teaching
- Maintain/improve currency in the field
- Professional advancement
- Personal enrichment
- Serving as a positive role model for students
- Develop valuable professional contacts
- Observe new teaching techniques
- Improve research skills (reading, writing papers, citing references)
- Improve writing and speaking skills
- Re-ignite love of learning

The more topics a professor is competent to teach, the broader the education his/her students will receive. This is especially true in smaller departments, where there may not be sufficient faculty members to cover all of a discipline's recognized sub-disciplines. Therefore, additional training, whether it leads to an advanced degree or not, can be used to fill the gaps in a department's areas of expertise. Furthermore, graduate work is an excellent opportunity to maintain or improve one's currency in the engineering field. The state of the art is a moving target, and nowhere are one's sights set more clearly on that target than in graduate school.

In addition to improving the students' education, obtaining additional education can benefit the faculty member professionally. The more skills a professor possesses, the more valuable they become and the more like they are to receive tenure, promotions, and increases in salary.

Beyond the professional realm, there is much to be gained at the personal level. Most people's entry into the academic career path is fueled by a love of learning. The love of learning should not be set aside simply because the arbitrary benchmark of the doctoral degree has been reached. Further graduate study allows it to continue, often under less pressure, as it becomes learning purely for learning's sake.

The need for continuing education throughout an engineer's career is well established. ABET 2000 requires that students be educated in its importance. There is no better way to teach than by example. By pursuing further education, one sends the message to students that continuing their own education truly is important. Additionally, students will soon realize that their professor really can understand what they're going through as students, and faculty can more clearly remember what it was like to be a student. Both of these effects can greatly improve professor-student relations.

Several secondary benefits can also accrue from an additional graduate degree. Whether completed at one's own university or at another nearby institution, valuable professional contacts will be developed both among the faculty and among the other graduate students. The faculty member sitting at the student's desk will also have the opportunity to observe a variety of teaching techniques, and each of their professors can help them to learn how to be a more effective teacher in one way or another.

In the case of a non-engineering graduate degree, it is likely that the professor/student will develop stronger researching and communication skills, including improved reading speed and comprehension, improved ability to write clearly, and a more complete understanding of the use of library resources.

Finally, and perhaps most importantly, an additional graduate degree can help to re-ignite one's love of learning. Most professors went on to graduate school the first time and decided to pursue an academic career because he/she loved learning, but too frequently the daily grind of grading and preparing lectures can cloud the memory of this feeling. Both authors found that having the opportunity to experience an academic setting again

as a student reinforced their own desire to continue to learn, even after the degree was completed.

5. CHALLENGES ASSOCIATED WITH FORMALIZED CONTINUING EDUCATION

The single greatest challenge associated with pursuing an additional graduate degree is a lack of sufficient time. College professor is a job that will fill all available time one chooses to devote to it, and pursuing an additional degree significantly detracts from that available time. This can lead to an inability to perform to one's own standards as a student, but more importantly, it can lead to decreased performance as a teacher. It can also detract from time for scientific and pedagogical research, and it definitely will detract from time available to spend with family and friends. As a result, it can also lead to a temporary decrease in morale and happiness, especially if the time to complete the program is longer than a year or two.

For faculty studying at their own university, it is important to clearly distinguish between one's role as a teacher and as a student. Doing so is essential to building positive relationships with graduate school faculty and other graduate students, but it is also important to separate those roles in one's own mind, which can be very difficult.

For faculty studying at another university, commuting time can be an issue. For many faculty members, there are no other strong universities nearby, so traveling to a second school to study may require many additional hours per week. Ideally, one would study at another university within easy commuting time of one's own employer.

The final challenge is less obvious. The additional graduate degree does not explicitly lead to new career opportunities, and many of one's faculty colleagues may be confused about the motivation underlying such a decision. One should expect the need to address such ongoing puzzlement and to reassure one's colleagues that no major career changes are in store.

6. LESSONS LEARNED

The authors learned many lessons in their academic adventures, and these lessons may prove very useful to anyone else who is considering following in their paths. While certainly everyone's path is different, one should always keep the following in mind:

- *Be sure that this is really what you want to do.* There is nothing more frustrating than having a half-completed degree following you around. Also, be certain you are very interested in the topic before you begin the degree, because you will be giving up lots of other opportunities in order to study it.
- *Get your family's approval and support.* Remember that this will not only be a burden on you, but on them as well.
- *Get your department and college's support.* In order to do this, you may need certain accommodations, such as being allowed to teach three days a week while

going to school the other two. Point out to them that this is to their benefit as well.

- *Go slowly.* For a professional working full-time, an upper limit of two classes per semester is reasonable. While it will lengthen the process, it will also lessen the pain. If possible, it is good to accelerate this pace through one or two semesters of sabbatical leave. An entire Master's degree could be fit into one year of sabbatical leave, or a single semester could allow one to be immersed in the program and get a great jump on the degree requirements.
- *Go locally.* If possible, do your work at your own, or a nearby university. The undertaking is difficult enough without adding 10 hours a week of commuting time to it. The best possible case would probably be studying at another high-quality university within close commuting distance from your home and work.
- *Get someone else to pay for it.* Look into tuition remission or funding through your university geared specifically at faculty development.
- *Get tenure first.* It's probably best, especially at research-oriented schools, to have the job security afforded by tenure before tackling such an effort.
- Remember to take time for yourself and to keep things in proper perspective.
- Enjoy!

7. CONCLUSIONS

Graduate work beyond the Ph.D. can be extremely rewarding, but it can also be extremely challenging. It is difficult to balance the responsibilities of family and an existing career with a new "career" that requires a great deal of time and energy, as well. In the authors' experiences, their formalized continuing education efforts have been entirely worthwhile, in spite of the additional workload required to complete them.

REFERENCES

- J. W. Alstete (2000), *Posttenure Faculty Development : Building a System for Faculty Improvement and Appreciation*, Jossey-Bass, San Francisco.
- W. W. Brickman and S. Lehrer (1962), *A Century of Higher Education; Classical Citadel to Collegiate Colossus*, Society for the Advancement of Education, New York.
- K. P. Cross (1981), *Adults As Learners*, Jossey-Bass, San Francisco.
- E. Hayes (1989), *Effective Teaching Styles*, Jossey-Bass, San Francisco.
- T. M. Hesburgh, P. A. Miller, and C. R. Wharton, Jr. (1973), *Patterns for lifelong learning*, Jossey-Bass, San Francisco.
- C. O. Houle (1984), *Patterns of Learning*, Jossey-Bass, San Francisco.
- E. S. Hunt (1992), *Professional Workers as Learners : The Scope, Problems, and Accountability of Continuing Professional Education in the 1990s*, U.S. Dept. of Education, Washington, D.C.
- A. W. Lerner and B. K. King (1992) , *Continuing Higher Education : The Coming Wave*, Teachers College Press, New York.
- S. B. Merriam and P. M. Cunningham (1989), *Handbook of Adult and Continuing Education*, Jossey-Bass, San Francisco.

- S. F. Pickering (1985), *A Continuing Education*, University Press of New England, Hanover, NH.
- S. B. Sarason (1993), *The Case for Change : Rethinking the Preparation of Educators*, Jossey-Bass, San Francisco.
- J. H. Schuster and D. W. Wheeler (1990), *Enhancing Faculty Careers : Strategies For Development and Renewal*, Jossey-Bass, San Francisco.
- R. M. Smith(1990), *Learning to Learn Across the Life Span*, Jossey-Bass, San Francisco.
- B. K. Stendahl (1980), *Sabbatical Reflections : The Ten Commandments in a New Day*, Fortress Press, Philadelphia, PA.
- D. W. Vermilye (1974), *Lifelong Learners : A New Clientele for Higher Education*, Jossey-Bass, San Francisco.
- K. J. Zahorski (1994), *The Sabbatical Mentor : A Practical Guide to Successful Sabbaticals*, Anker Pub. Co., Bolton, Mass.