Contemplate Doctoral Study

By Jim Flowers and Edward Lazaros

Technology Education is a field in need of researchers (Reed, 2002) and teacher educators (Volk, 1997). Our only hope is for technology teachers to ask themselves, “Is doctoral study right for me?”

Motivation

Is doctoral study right for you? This is a difficult question that you might wish to answer after evaluating your motivation, goals, resources, finances, geographical constraints, family commitments, and much more. According to Dorn, Papalewis, and Brown (1995): “To earn a doctorate, an educator must find the time and motivation in nonworking hours to register, attend classes, read, research, and write papers” (p. 305). Doctoral study is intellectually rigorous, physically taxing, emotionally demanding, costly, and fraught with pitfalls that can discourage students, and many decide to withdraw before they finish a doctoral degree (Smallwood, 2004). However, some do find the motivation, perseverance, and resources to succeed in doctoral study.

Have you advised a high school technology education student to go to college? Maybe you cited the U.S. Bureau of Labor Statistics (2005) table that showed the median weekly earnings for a high school graduate was $574 (in 2004) compared to $916 for someone with a bachelor’s degree. Other data on that same table indicates median weekly earnings of $1,102 for a person with a master’s and $1,398 for someone with a doctoral degree.

A doctoral degree may open unforeseen doors for technology education teachers, as evidenced by different reasons for doctoral study. In a recent survey of those in technical education, the most common motivational reasons listed for considering pursuing a doctorate were “to be eligible for a new job” and “personal fulfillment,” although closely behind were “pay raise” and “status” (Flowers & Baltzer, 2006b). Rossman (2002) suggests that, in the early stages, one makes a list of reasons for wanting a graduate degree and then classifies these as either “employment related” or “personal,” noting that there will likely be a variety of reasons for a single individual, and suggesting that it is important to realize these at an early stage. While it is all right to stay in your existing job after
earning a doctorate, it is likewise an opportunity to work in a different job.

University teaching in a technology education program is likely the “new job” that most commonly springs to mind. However, jobs in higher education often involve much more than teaching; and over the years, research, service, or administration might outweigh the time devoted to college teaching for many faculty members. Speck (2004) suggests examining how well a potential doctoral program would prepare the candidate for the variety of tasks professors do. This may combine with an evolving self-image (Gammel, 2006; Jablonski, 2001), as illustrated by McCoy Higgins’ (2007) case studies of three mid-life female doctoral students who began to see themselves as researchers. A doctorate may also open doors outside academia, if one has chosen the area of a doctorate with this in mind. Whether personal or professional, one’s reasons for pursuing doctoral study need not fade at a certain age. Short (2004) found both personal and professional motivating factors among adults 50 years old and older as they pursued doctoral study. In another study, Bair (1999) looked at attrition and persistence of doctoral students and found that while the relationship between a student and his or her doctoral advisor was critical, several factors did not impact persistence: “age, children and family, full-time/part-time enrollment status, race, and sex” (ix).

Those considering doctoral study should ask themselves if they have the motivation, the opportunity, and the means necessary to succeed. Grover (2004) suggests going a bit deeper, assessing traits by asking the following: “Do you enjoy reading…discussion…debate…thinking about areas in the field…writing? How are your organizational…time management skills? How would you handle unstructured situations…?” (p. 25). In addition to a self-assessment of one’s motivation, opportunities, and means, it is wise to look at the variety of doctoral programs available and attempt to find a good fit.

Selecting a Doctoral Program

Pittman (1997) suggested that those selecting a graduate program should consider the factors of accessibility, admissibility, reputation, and cost. Rittner and Trudeau (1997) further suggest comparing selected programs in one’s field of interest based on information about core courses, elective courses, student-faculty ratios, and several other criteria. Schniederjans (2007) proposed a “Ph.D. Students’ Bill of Rights,” which may be of interest to those establishing criteria by which to compare doctoral programs, and includes items such as the right to be provided with “a recognized expert in the dissertation subject’s area” (p. 3).

If a doctoral degree is of interest because of new employment opportunities, it would be wise to select a program with employment criteria in mind. For example, we recently found that, in general, those involved in hiring technical education faculty at bachelor’s and master’s degree-granting institutions (Flowers & Baltzer, 2006a) and at doctoral institutions (Baltzer, Lazaros, & Flowers, 2007) admitted to a hiring bias against candidates who earned a doctoral degree online.

One factor in selecting a program is whether the degree is a Ph.D. or an Ed.D. Each of these doctoral degrees is available in the field of education, with the Ph.D. linked more to researchers and the Ed.D. a terminal degree for
Some may think it unnecessary to ask, “In which area do I want to pursue a doctorate?” assuming that a doctorate should be in the same area as one’s previous degrees. For some areas of study, such as electrical engineering, this may be more important than for others, such as education. It is not uncommon to find individuals crossing fields by applying to doctoral programs in new areas. (The authors are two examples, having studied technology education, and then switching to Educational Technology and Forest Resources Science for Ph.D. work.) Although additional coursework may be required, a doctorate outside one’s previous field can provide the advantage of being able to blend several fields together as a specialist in each and may lead to a more attractive package for potential employers.

Some may wish to pursue a doctoral program in educational administration, educational psychology, or another field within or outside education other than the field of technology education. For those considering doctoral study in the field of technology education, one starting point could be reviewing Table 1, quoted from our review of data from 19 out of 23 doctoral programs in technical education (Baltzer, Lazaros, & Flowers, 2007). We found these programs to have different themes, different requirements, faculty with different interests, and other differences that should be taken into account by those looking for a doctoral program in the field. This list, and graduate school guides (e.g., www.gradschools.com, www.petersons.com), are only a starting point; those who are interested should look at a program’s online information and then talk with a faculty member.

**Doctoral Study**

According to Jablonski (2001), “The course of doctoral studies typically includes 60 credit hours of study beyond the master’s degree” (p. 217), including courses that help prepare them as researchers in the field. Students typically take “candidacy exams” after completing most of their coursework, and they may be asked to defend their plans for dissertation research. Working under the guidance of an advisor, these doctoral candidates then conduct original research. Through successive drafts and reviews, the candidate writes, edits, and defends a dissertation, and often authors one or more articles or presentations based on the research. This adds to the collective knowledge of the field and establishes the author as a specialist within an area of interest. In some programs, doctoral students may work on several research projects in addition to their dissertation research, gaining additional knowledge, experience, and credentials. Prospective students should consider taking advantage of graduate assistantships, benefitting not only from a tuition waiver and stipend, but also from the experience their GA employment involves (e.g., college teaching, research).

What would doctoral study be like for you? The answer will be different, even for students who are side-by-side in the same program. With the increased use of online and hybrid education, some of the logistics of doctoral study may be different now than they were 20 years ago, such as literature searches and a requirement to take classes face-to-face. However, there are issues, mistakes, and strategies fairly common to doctoral study over the years. Grover (2007) suggests that doctoral study can be seen in four stages: exploration, engagement, consolidation, and entry (to the field), with growing maturity at each progression. He identifies common blunders for each stage, with mistakes in the exploration stage including: being too reactive, not seeking help, not building an asset base, and not being politically astute. New doctoral students may avoid some initial pitfalls by being aware of these and taking proactive steps. Some pitfalls may be addressed in the selection of one doctoral program over another; for example, if they differ regarding the peer support offered to students (Dorn, et al., 1995).

While there is variety among institutions, doctoral programs, and how a student experiences those programs, there are also some common outcomes of doctoral study. Bergman (2006) found several themes that cut across fields in doctoral programs: cognitive complexity, emotional intelligence, an internal locus of control, and socialization to one’s professional field. These are indeed challenging, and only those who want to meet this challenge with enthusiasm, courage, and an open mind are advised to proceed. In particular, the common requirement of a doctoral dissertation can be an intimidating challenge.

**Dissertation**

Decisions made by doctoral students can impact their success. Lee (2003) compared dissertation completers with noncompleters, and found the former to have greater satisfaction with the faculty advisor, the dissertation chair, and their research. The number of individuals classified as “all-but-dissertation,” or ABD, speaks to the intimidation sometimes felt regarding doctoral dissertation research design, execution, writing, and defense. If that intimidation cannot be overcome, one should question whether doctoral
study is a good choice. However, some find that their original thoughts about “people with doctoral degrees” contain a number of questionable assumptions, such as “These people are smarter than I,” “They knew what they wanted to do when they began,” and “What they have to say is important because of their degree.” As a doctoral student’s outlook matures, the student may see doctoral education as a test of determination more than a filtering based on intelligence.

One potential obstacle is the selection of a dissertation topic. Here, Bryant (2004) offers some advice: “Don’t try to save the world” (p. 17) and “Don’t pick a topic that will solve a personal issue” (p. 18). He also suggests that one be cautious about “gift topics” where one latches on to an advisor’s research and sidesteps the development of an original topic. Instead, he does suggest considering “a topic that will be of service to your field” (p. 19), which may assist in finding a job.

Table 1  Doctoral Programs Related to Technical Education (Based on Baltzer, Lazaros, & Flowers, 2007)

<table>
<thead>
<tr>
<th>University</th>
<th>Program</th>
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<tr>
<td>Clemson University</td>
<td>Ed.D. in Career &amp; Technical Education (This program was no longer accepting students at the time of the interview.)</td>
</tr>
<tr>
<td>Indiana State University</td>
<td>Ph.D. in Technology Management</td>
</tr>
<tr>
<td>North Carolina State University</td>
<td>Ed.D. in Technology Education</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>Ph.D. in Education with option in Occupational Education</td>
</tr>
<tr>
<td>Old Dominion University</td>
<td>Ph.D. in Education with a concentration in Occupational &amp; Technical Studies</td>
</tr>
<tr>
<td>Purdue University</td>
<td>Ph.D. in Curriculum &amp; Instruction with a concentration in Career &amp; Technical Education</td>
</tr>
<tr>
<td>Southern Illinois University Carbondale</td>
<td>Ph.D. in Education with a concentration in Workforce Education</td>
</tr>
<tr>
<td>The Ohio State University</td>
<td>Ph.D. in Science, Technology, Engineering and Mathematics</td>
</tr>
<tr>
<td>University of British Columbia</td>
<td>Ph.D. and Ed.D. in Curriculum Studies with a concentration in Technology</td>
</tr>
<tr>
<td>University of Georgia</td>
<td>Ph.D. and Ed.D. in Workforce Education</td>
</tr>
<tr>
<td>University of Manitoba</td>
<td>Ph.D. in Education with an area in Technology or Technology Education</td>
</tr>
<tr>
<td>University of Minnesota</td>
<td>Ph.D. and Ed.D. in Work &amp; Human Resource Education</td>
</tr>
<tr>
<td>University of Nevada-Las Vegas</td>
<td>Ph.D. in Educational Leadership</td>
</tr>
<tr>
<td>University of North Texas</td>
<td>Ph.D. and Ed.D. in Applied Technology &amp; Performance Improvement</td>
</tr>
<tr>
<td>University of South Florida</td>
<td>Ph.D. in Curriculum &amp; Instruction with a concentration in Career and Workforce Ed.</td>
</tr>
<tr>
<td>Utah State University</td>
<td>Ph.D. and Ed.D. in Education (Curr. &amp; Instr), emphasis in Engineering and Technology Education</td>
</tr>
<tr>
<td>Valdosta State University</td>
<td>Ed.D. in Adult &amp; Career Education</td>
</tr>
<tr>
<td>Virginia Polytechnic Institute and State University</td>
<td>Ph.D. and Ed.D. in Curriculum &amp; Instruction with a concentration in Technology Education</td>
</tr>
<tr>
<td>Western Michigan University</td>
<td>Ph.D. in Educational Leadership (CTE Concentration)</td>
</tr>
</tbody>
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www.indstate.edu/consortphd/  
http://ced.ncsu.edu/mste/tech_programs/tedd.php  
www.okstate.edu/education/graduatestudies/phd.htm  
http://education.odu.edu/ots/academics/grad/phd.shtml  
www.edci.purdue.edu/grad_studies/degrees.html#PhD  
http://wed.siu.edu/Public/graduate/phd/  
http://ehe.osu.edu/edtl/academics/phd/math/  
www.coedu.usf.edu/main/departments/ache/VocationalEdPhD.htm  
www.umn.edu/WHRE/program/doc.html  
http://www.lt.unt.edu/doc_programs.html  
http://education.umn.edu/WHRE/program/doctor.html  
http://www.coe.uga.edu/welsf/wfed/programs/grad.html  
http://teched.vt.edu/TE/pdfsNdocs/TE_Program/PhD_TESummary.pdf  
www.wmich.edu/coe/fcs/cte/doctoral/index.htm
and in a continuing research agenda. Finally, he recommends narrowing the focus of a topic and remaining adaptable. After the topic is selected, the degree to which one controls one’s own research is important. An evolving self-image has been noted above, and this can impact success. Good (2002) found research self-efficacy to be a critical factor in progress toward completing the dissertation.

As Reed (2002) noted, the field of technology education is in need of more researchers who will work to expand and deepen the knowledge base of the profession. They do this during graduate study by writing master’s theses and doctoral dissertations, but also in the years that follow where they use powerful research tools and skills to investigate areas that can make a difference in the field. The impact of researchers on the field of technology education can be tremendous, though without a sufficient number of researchers and higher education faculty members in the field, our future is in question.

Summary
It takes an honest look for a technology teacher to determine whether he or she should engage in doctoral study. Doctoral programs have a rather high attrition rate, as high as 40 or 50%, and university resources might be better spent on those who have a greater chance of succeeding (Smallwood, 2004). However, for those who take the plunge, doctoral studies can be a personally and professionally rewarding experience. “The perceived value of doctoral studies for educators yielded perceptions that doctoral studies were a means of lifelong learning, and such studies challenge students to accomplish greater tasks, manage their time, and organize ideas” (Jablonski, p. 220, 2001). The value for the field of technology education includes a strengthening of our knowledge base and a sufficient number of faculty to maintain healthy technology teacher education programs. If you think that doctoral education may be in your future, assess your resources, compare your options, and contact faculty from the doctoral programs you are considering.

References


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