Portfolio as a Comprehensive Exam: Instigating Change[1]

Rebecca L. Fiedler
University of Central Florida, United States
becky@msfiedler.com

Donna Baumbach
University of Central Florida, United States
baumbach@mail.ucf.edu

Abstract: The authors of this paper proposed the creation of an electronic portfolio to be considered as an alternative to the traditional, paper-based exam and oral defense for Ph.D. students in the Instructional Technology program at their large metropolitan university. To explore the feasibility of this alternative, they proposed to use one student as a case study. This paper describes their rationale, plan, grading rubric, and experiences, as they examined this change.

Rationale

For many years, portfolios have been used for a variety of purposes – from artists showcasing their work to investors tracking their financial performance. The literature offers an array of definitions, depending on the purpose of the portfolios. One often-cited definition comes from Shulman (1998) in which he describes a teaching portfolio as "the structured documentary history of a set of coached or mentored acts of teaching, substantiated by samples of student [work], and fully realized only through reflective writing, deliberation, and conversation" (p. 37). Electronic portfolios are becoming increasingly popular. Barrett (2001) reminds us that "what differentiates an electronic portfolio from a digital scrapbook or an online resume is the organization of the portfolio around a set of standards or learning goals, plus the learner's reflections, both on their achievement of the standards, and the rationale for selecting specific artifacts, as well as an overall reflection on the portfolio as a whole" (¶11).

The American Association for Higher Education (AAHE, 2003) has developed a taxonomy for electronic portfolios focusing on context (course, program, institution, inter-institutional, or independent), author (student, faculty, administrator, or organization), and purpose (development, evaluation, or presentation). This paper describes an independent, student, evaluation portfolio.

Portfolios, both paper-based and electronic, have been widely used in Colleges of Education: undergraduate students prepare exit portfolios documenting competence in standards; committees review portfolios to select teaching award recipients; promotion and tenure decisions are based on portfolios; and professors submit portfolios for post-tenure reviews (Shulman, 1998).

Customarily, an important requirement of a doctoral program is to take and pass comprehensive exams – either a single exam or a series. What are comprehensive examinations? American Heritage Dictionary defines these as "examinations covering the entire field of major study" (p. 379). According to the Oxford English Dictionary, comprehensive is "having the attribute of comprising or including much; of large content or scope" (p. 632).

The authors see a natural relationship between the summative nature of a well-crafted independent, student, evaluation portfolio and the intent of the traditional comprehensive examination. Students can design their comprehensive portfolio to document competence in all program standards with relevant artifacts and reflections.

Experience Reports

Mentor

The Ph. D. program in Educational Media/Instructional Technology is relatively new in the college, and there have been several changes in program faculty since it began. While one might expect a new program in an area of rapid change to be fluid and open to innovation, "tradition" is already being established based on older programs and faculty experiences in other colleges and states. While most of these traditions were not included in any written program guidelines, "folklore" was already beginning to rule. I believe it was folklore—that one *might* be able to do something innovative in lieu of a comprehensive exam—that started this journey. A doctoral student wanted to do an eportfolio, but there was some reluctance to make an exception in such a young program.

Because the student had decided to do her dissertation proposal in the area of portfolios; because we had both done much reading about portfolios and the process and felt that program standards and requirements could be met and competencies demonstrated through a portfolio; and because we both recognized the need to experience the portfolio process as a missing element in her preparation, a portfolio in lieu of a comprehensive exam seemed a natural fit.

The concept of portfolios was not new to the college faculty. Undergraduate majors have been building portfolios for several years, and faculty have witnessed the positive aspects as well as the problems associated with both the process and the product. In this academic year, a new eportfolio product and process is being adopted and faculty trained, with the goals of integrating technology into the preservice program, providing individual evidence of program outcomes, standardizing both the process and the product across disciplines for preservice teachers.

This familiarization with portfolios and eportfolios served as both an advantage and a disadvantage in the effort to get permission to use a portfolio in lieu of a comprehensive exam for a Ph. D. student. Faculty generally understood the portfolio concept and the process; however, most program faculty have not worked with preservice teacher education students nor have they evaluated their portfolios. None had created a portfolio beyond that required for promotion and tenure. Because portfolios had been used primarily by undergraduates, they did not necessarily see them as a tool for demonstrating or assessing the higher level, more complex knowledge and skills required in a doctoral program. Would the portfolio be rigorous enough? Would the process lead to the research and dissertation phase of the program as the traditional comprehensive exam was designed to do?

I talked with each member of the faculty individually, and all were in agreement that in this instance, a portfolio might be appropriate and, once a written proposal was submitted to and approved by program faculty, they would support the request to the college Ph. D. coordinating council for a pilot project.

The following proposal was approved by program faculty and submitted to the College of Education Ph.D. committee for approval as a pilot/case study:

1. A student wishing to create an electronic portfolio as his/her candidacy exam must first discuss the option with the program and/or dissertation advisors. If an electronic portfolio fits the content and context of the student's program of study and research goals and they jointly decide to proceed with the electronic portfolio option, they determine the structure for the portfolio to reflect mastery of IT concepts, achievement in the cognate area (as applicable), and research.
2. In keeping with the College of Education's conceptual framework of "the reflective practitioner," each artifact selected for inclusion in an electronic portfolio must have a reflective statement. This reflection should provide the rationale supporting the inclusion of the specific artifact, explain how the artifact documents competency in the IT/ET field, and demonstrate connections within and among the artifacts as well as theories in the field. Barrett (2001) refers to reflection as "the heart and soul of the portfolio" (¶1). The described metacognitive requirement is appropriate to a "comprehensive" exam.
3. Appropriate tools for creating the electronic portfolio should be selected by the student and the advisor; ease of use and navigation are integral elements of any electronic portfolio and should be selected with as much thought and research as the artifacts and organizational schema.
4. Two professors selected by the student and advisor will review and evaluate the completed portfolio. The student and professors will schedule and conduct a portfolio defense at a mutually agreeable time. At this defense, the student will present portfolio highlights to those in attendance - answering questions and providing

additional information as needed. The goal of the completed portfolio and resulting defense will be to allow the evaluating professors to determine if the student has demonstrated sufficient achievement and competency to be admitted to candidacy status. The evaluating professors will provide feedback to the student, noting areas of growth and achievement, and helping to set goals for further development and dissertation research.

A grading rubric used for this case study based on standards defined in the Ph.D. program handbook was developed and submitted as part of the proposal. No grading rubric for the current comprehensive exam could be located, but I felt it was important to include one in order to illustrate that competency in program standards could be demonstrated in an electronic portfolio. In addition, it was important that guidelines for grading were available to both the student and the program faculty prior to commencing the process. The complete rubric, along with the faculty feedback form, is posted online at http://www.msfiedler.com/portfolios.htm.

The committee decision was delayed several months due to already full-schedules and severe weather in the state. Ultimately, the committee agreed to allow the pilot to proceed, viewing it as an opportunity for program faculty to examine the process and allow further study. Fortunately, the student was already well into the process, determined to use it as a learning experience whether or not it could be used in lieu of a comprehensive exam.

The student documented her eportfolio journey in a web log. I subscribed to the blog and was able to observe her thinking, decision-making, and reflecting, all critical elements of the pilot and the product. One additional faculty member, interested in the portfolio process as well as in instructional design and technology, also followed the progress via the blog. I think it ably demonstrated that the process is complex and difficult. Many decisions are required, and while instructional design and technology practice and research can form a strong foundation for many of those decisions, the struggle often has more personal and subjective components.

I had trouble getting evaluators for the portfolio. Perhaps already busy program faculty may have recognized that evaluating portfolios can be more difficult and time-consuming than reading the paragraphs of text generally associated with comprehensive exams, or perhaps they wished to remain apart from the pilot. In the end, one member of the program faculty and one outside faculty member with a degree and interest in Instructional Technology agreed to be "readers." Their evaluations were thorough, critical, thoughtful, and insightful. The oral examination that followed differed very little from what had been experienced with previous students. Little of the conversation focused on the portfolio or the process. Instead, questions and discussions centered on core constructs and research in the field, and suggestions were not about the portfolio but on ideas and resources for the student's continued professional growth.

Student

I wanted to create an electronic portfolio in lieu of the traditional comprehensive exam but encountered significant resistance from some program faculty. As I discussed this idea with my mentor professor, she agreed to make a formal, written request to the appropriate committee at the beginning of the semester in which I was scheduled to take my comprehensive exams. Shamelessly optimistic, I began working on my portfolio. Waiting for the committee's approval was nerve-wracking as I moved between feeling confident the proposal would be approved to concern I should be studying for a traditional comprehensive exam. I expected the portfolio process to be more difficult than the traditional comprehensive, but if the proposal was rejected, I needed to study for the traditional comprehensive exam. After nine weeks of deliberation, the committee granted permission for us to proceed with a one-time pilot of a portfolio-as-comprehensive.

In addition to the anxiety of the long decision cycle, I felt several forms of stress. Naturally, there was the pressure of wanting to do well on my comprehensive exam – no matter the form. Additionally, I was aware that my mentor professor had advocated for this project to proceed and did not want to disappoint or embarrass her. Finally, there was the pressure associated with being the subject of a public experiment.

Early in the process, my mentor suggested I keep a record of the decision-making involved in my portfolio. We agreed that I would use a web log (http://www.msfiedler.com/blog/) for that purpose. Knowing I would be writing about my decisions immediately turned my record keeping into an important reflective element of the entire portfolio process. Of course, the public nature of a blog heightened my awareness of the reflections and metacognition. I knew the professors evaluating my portfolio would want to know *why* I made the decisions I did

and I believed any of my decisions might be challenged. My mentor read my blog entries as part of her RSS feeds. This proved to be an effective form of communication for us and enabled her to efficiently monitor my efforts.

Because this was a pilot study, there were few guidelines in place to help me or to constrain me. I needed to decide, in consultation with my mentor, what tools to use, how to organize and structure the portfolio, how it would be distributed, and the quantity and type of artifacts to include. It is appropriate for IT/ET doctoral students completing a portfolio-as-comprehensive to make integral decisions such as these and to be asked to justify those decisions. These decisions and justifications represent concrete applications of an IT/ET student's knowledge and skills in the field.

The first decision was the choice of tools. Carney's (2002) "self-expression dilemma" was immediately apparent. Initially, I planned to use a commercial tool the College of Education adopted despite the extremely limited affordances it offered for designing the look and feel of my portfolio. I wanted to experience the system undergraduates at my institution would be required to use. However, persistent problems with the system led me to abandon it in favor of the "generic tools approach" Gibson and Barrett (2002) advocate. I hoped to take advantage of the flexibility of cascading style sheets (CSS), but acknowledged I could not learn enough about CSS in the limited time available to use it for my project. Citing Carney's (2002) "cognitive overload dilemma" as justification, I decided to hire a web designer to create templates for my portfolio. I was concerned this decision would be problematic for the evaluating professors, but reasoned I could include several examples of my own web design to illustrate my skill in this area. I discussed the decision with my mentor before moving forward with it. The other two evaluating professors knew I used a web designer and accepted it without discussion. The choice of specific tools for project development is appropriately left to the IT/ET student who should be well-equipped to make these decisions.

Determining the organization of the portfolio was the next challenge. Two organizational schemes readily came to mind: organization around a specific set of standards or organization around the traditional professorial duties of teaching, research, and service. Organizing the comprehensive portfolio around program standards was the immediately obvious structure and likely to satisfy faculty critical of this pilot. However due to recent changes in program faculty, we could not find the official program standards and considered using standards from one of the professional organizations. I was concerned choosing standards from one organization would leave opportunity for critics to say I had chosen poorly. In the face of this resistance, it seemed prudent to proceed with the portfolio development while continuing to search for institutionally approved program standards to incorporate at a later date. I chose to organize my portfolio around teaching, research, and service.

Eventually, I found some program standards in a student handbook distributed my first semester in the doctoral program. I developed a matrix to cross-reference these standards and my artifacts. Applying the published standards to the portfolio process generated discussion among faculty as they re-examined the standards and found modifications they wanted to make. At the oral defense, two of the evaluating professors asked about my decision to organize my portfolio as I did. They strongly recommended that organization around program standards would have made their assessment task easier. I've carefully considered their comments and am convinced a standards-based structure would not have been the best representation of my work and would not have provided the best demonstration of meeting the standards. Other students might find standards an effective organization scheme. I am fortunate to have had many opportunities to apply my expertise and education outside the program of study and had several very rich, real-world artifacts available to use. Under a standards-based organizational scheme, I would have discarded some of my most sophisticated artifacts in favor of others that more neatly demonstrated a specific standard. (See Austin (1996) for a complete treatment of the phenomenon of unintended consequences of measurement systems). Furthermore, a standards-based organization would not have advanced progress to my longer-term goal of employment after graduation, requiring significantly more modification than my portfolio organized around teaching, research, and service. Carney (2002) refers to this as the "multiple-purpose dilemma."

The question of how the portfolio would be distributed is one that should be addressed before creating a portfolio-as-comprehensive. One faculty member insisted a portfolio should be public and freely accessible on the Internet so prospective employers can access it. I think this is inappropriate for several reasons. The audience for an examination is not the same as a prospective employer. Students creating an employment portfolio will select different artifacts and craft their writing in different ways for a prospective employer than for a small group of trusted professors. Further, there are significant ethical issues in requiring students to waive their privacy by publicly posting their personal reflections and formative pieces of work. I chose to distribute my portfolio on CD because I

was uncomfortable making my reflections available on the Internet. Carney (2002) calls this the "self-revelation dilemma." Clearly, a decision about such a requirement should be carefully examined before implementing a portfolio-as-comprehensive program.
Portfolio creation is "a theoretical act" (Shulman, 1998), requiring authors to choose and reflect on artifacts selected to document development and competency in a given domain. Such decision-making demonstrates the complex thinking required in the practical applications of instructional design and multimedia development (Barrett, 2001; Jonassen, 1996). It is evident that the majority of decisions about which artifacts to include should be left to the student, particularly at the doctoral level.

The final requirement for my portfolio-as-comprehensive was the oral defense. This provided faculty evaluators a chance to discuss the artifacts and the process with me. As I worked my way through this pilot, faculty re-examined the IT/ET program. The defense gave them a venue to ask direct questions about my experience in the program, what I learned in the program, and how the program might be improved. The breadth of the portfolio-as comprehensive forced a broader examination of the program than a traditional comprehensive.

If I could have changed one thing about my experience creating a portfolio-as-comprehensive, I would wish to have been immersed in a culture of portfolios from the beginning of my program. Trying to complete and defend my portfolio in one semester was much too short a time frame. Near the end of the process, I was making decisions based on time constraints rather than the quality of the end product. Awareness of the portfolio process from the beginning of my program would have alleviated some of those pressures. An additional benefit I believe a portfolio culture would provide has to do with collecting artifacts. I've saved most work products, but deleted numerous email messages that would have been excellent artifacts for my portfolio. In a portfolio culture, I would have known to save those, too. I also believe professors and peers alike would have been more likely to offer comments, critiques, and compliments in portfolio-friendly formats.

Next Steps

Mentor

Program faculty members have agreed that portfolios can be valuable to both the student and to the program, and that eportfolios provide additional practice in and competency with technology. The graduate program will require eportfolios, beginning at the master's degree level. Although faculty agree that the portfolio in lieu of exam was appropriate for this student, they are reluctant to make it a part of the doctoral program, even as an alternative, at this point. However, I don't think they have ruled out the possibility entirely. Faculty were impressed with the quality of the pilot student's portfolio, the artifacts selected, her reflections, the organization and navigation. A better model for future students would be difficult to develop; she has set a high standard.

As college faculty continue to work with undergraduates on their eportfolios and program faculty guide master's degree students in designing and evaluating portfolios that reflect their professional growth and development, I believe the benefits of the portfolio process will become more evident and an integral part of all College of Education programs. While problems will be encountered, they will afford the opportunity for faculty to engage in conversations that will lead to program improvement and renewal.

In reflecting on the process and product, it has become evident that some revision is needed to the Ph. D. program. Clear guidelines need to be developed and made accessible. The purpose of the comprehensive exam needs to be clearly stated as do rubrics for grading and standards for entry to candidacy. Program standards are not comprehensive and in some cases are redundant and need to be revised to align with core values and program goals. This portfolio experience has helped faculty reflect on the program and learn from the experience. It is a good reminder that, as Richard Bach says, we "are all learners, doers, and teachers."

Student

I intend to maintain my portfolio throughout my career and plan two more iterations of my portfolio in the very near future: an online version to post on my personal web site and another to use as an interview tool. I made the decision to hire a professional web designer in order to use CSS to prolong the useful life of my portfolio. This decision specifically addressed the "dead-end dilemma" in which portfolio authors feel a portfolio is finished or unavailable

for further revision that Carney (2002) describes. I view the cost of the designer as a most worthwhile investment in my future. Although my portfolio evaluators would have preferred a different organization for my portfolio, I am relieved it is already structured around teaching, research, and service as I move forward. I am not sure I would undertake a major reorganization as I work to complete my dissertation and approach job interviews.

Other students have asked me about my experience and I know I will field more questions as word spreads about using a portfolio instead of a traditional comprehensive. Several students have requested a copy of my portfolio to examine it more carefully. They see the value in having an electronic portfolio as an interview tool. It will be interesting to see if more students petition the college committee to substitute an electronic portfolio for the traditional comprehensive.

Final Words

Despite the challenges we faced throughout this process, we would do it again. We submitted our proposal because we believed an electronic portfolio would be an appropriate form of comprehensive assessment for a doctoral student and our experience has confirmed this. Developing a portfolio requires students to offer written reflections and to provide compelling evidence that they can apply their knowledge, skills, and abilities in the artifacts they choose to include. Decisions and actions taken throughout the development of an electronic portfolio further demonstrate competence in the IT/ET field. Traditional written comprehensive examinations do not offer the same high-fidelity picture of a student's mastery of program standards.

Students and faculty interested in using a portfolio-as-comprehensive would be well advised to pilot the idea using a small group of students before moving forward with a program-wide implementation. All parties should give careful consideration to grading standards, development tools, distribution, artifact selection, organization and structure. It is important to make agreements and set expectations at the beginning of the process. Student participants will need to understand any constraints under which they are expected to operate.

Developing an excellent portfolio can be a time-intensive task and faculty will need the experience of a pilot to calibrate their expectations and to observe the full spectrum of what students are capable of developing. Student reflections and experiences may reveal weaknesses in the program or in the student's preparation and faculty should be prepared for this eventuality. Problems will be more easily addressed on a small scale and students should be encouraged to share them as they are discovered. Guidelines, procedures, and assessment instruments are likely to evolve as both students and faculty gain experience with the portfolio process. As portfolio assessment is institutionalized, student portfolios will become more reflective and sophisticated. Most importantly, a comprehensive portfolio can serve a student well beyond graduation as an important foundation for the next stage in the career.

References

AAHE. (2003). *Towards a taxonomy of electronic portfolios*. Retrieved November 13, 2003, from http://webcenter1.aahe.org/electronicportfolios/taxonomy.html#taxonomy

Austin, R. D. (1996). *Measuring and Managing Performance in Organizations*. New York: Dorset House Publishing Co. Inc.

Barrett, H. C. (2001). Electronic portfolios = multimedia development + portfolio development: The electronic portfolio development process. In B. L. Cambridge, S. Kahn, D. P. Tompkins & K. B. Yancy (Eds.), *Electronic portfolios: Emerging practices in student, faculty, and institutional learning* (pp. 110-116). Washington, DC: American Association for Higher Education. Also available online at http://www.electronicportfolios.org.

Gibson, D., & Barrett, H. C. (2002). *Directions in electronic portfolio development*. Retrieved October 9, 2003, from http://www.electronicportfolios.org/EPdirections.pdf

Jonassen, D., Myers, J., & McKillop, A.M, (1996). From Constructivism to Constructionism: Learning *with* hypermedia/multimedia rather than *from* it. In B. Wilson (ed.), *Constructivist learning environments: Case studies in instructional design* (pp.93-106). New Jersey: Educational Technology Publications.

Shulman, L. (1998). Teacher portfolios: A theoretical activity. In N. Lyons (Ed.), *With portfolio in hand: Validating the new teacher professionalism* (pp. 23-37). New York: Teacher College Press.

Simpson, J. & Weiner, E. (Eds.), (1989), *Oxford English Dictionary*. Oxford: Clarendon Press.