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Using Electronic Faculty Course Portfolios to Showcase Classroom Practices and Student Learning

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Abstract:

Faculty course portfolios are a valuable medium for documenting and making visible the serious intellectual work of teaching. Developing a faculty course portfolio follows the same process one uses to explore a research question. Faculty members inquire, analyze, and document their teaching practices and the resulting student learning and then make the results accessible for use, review, and assessment by one's peers. In this article, we introduce four types of electronic course portfolios that sponsor different forms of inquiry into student learning. We highlight the major components of each type, offer advice in developing them, and share examples of each. We conclude by describing how faculty members have used these types of course portfolios for promoting the scholarship of teaching and learning both locally and nationally.

Key Words:

Course portfolio, inquiry, Scholarship of Teaching and Learning, SoTL, assessment, learning outcomes.

Introduction to Course Portfolios

Are our students learning? Are they developing? Are we, as teachers, having an impact? As calls for accountability in higher education mount, faculty members are increasingly being asked to assess and make public their teaching practices. So how can faculty document their teaching effectively and in a form that can be visible and

accessible to others? Even faculty who value and support excellence in teaching often find it difficult to showcase the careful, difficult, and intentional scholarly work entailed in planning and teaching a course. One possibility is a faculty course portfolio that captures and makes visible the scholarly work of teaching by combining inquiry into the design of a course with an investigation of the quality of student understanding and performance (Hutchings 1998, Schulman 1998, Bernstein et al. 2006).

The concept of a portfolio is not new. Certain disciplines, such as advertising, architecture, composition, and studio art, have been active in having students create reflective archives of their classroom work. Having faculty mirror this same process to create course portfolios offers many of the same benefits—providing a reflective framework to think about course design, classroom practices, and student learning.

Unlike the more common teaching portfolio—in which faculty typically archive essential course documents such as the syllabus, sample assignments, examinations, and evaluations—a course portfolio is a reflective investigation of a course and what occurred during it. Creating a portfolio for a single course can often be valuable for faculty development since it is a concise and reflective document that can be shared with peers for their review and commentary. Instead of trying to demonstrate everything that they do as teachers via a teaching portfolio, a teacher can focus on the specifics of one particular course in a less overwhelming and more systematic way. If a faculty member writes course portfolios on different courses, the insights that are gained in the analysis of each course can later contribute to a more overarching teaching portfolio.

Faculty can use course portfolios in many ways. They can be useful for encouraging conversations about teaching with colleagues or serve as a foundation for assessment and curriculum development. Other uses include structuring the design of a new course; examining a course a faculty member is not satisfied with, showcasing a course that a faculty member is proud of and that reveals strong student performance; or creating a course template that other teachers of the course can review and draw upon for their own teaching. Possible uses of a course portfolio include:

- serving as a course repository and model to be used by future instructors
- supporting teaching award applications
- summarizing teaching for annual merit review evaluations
- documenting and assessing faculty development efforts
- highlighting teaching as part of a promotion and tenure file
- structuring or showcasing a curricular revision
- aiding in a department program review
- supporting a job application
- assessing learning outcomes for department or program accreditation.

In many ways, developing a course portfolio can be a faculty member's introduction to the "scholarship of teaching and learning" (Boyer 1990, Glassick et al. 1997). Some

faculty members use a course portfolio to provide the data for a conference presentation or scholarly publication about teaching.

To be useful for formative or summative review, a course portfolio needs to be in a format that is accessible for use and review by others. Paper portfolios are heavy to carry about and difficult and expensive to disseminate to colleagues at other schools. In comparison, electronic course portfolios offer opportunities for broad and easy access. Electronic course portfolios can also be printable, searchable, and easy to update. There are two other advantages for electronic course portfolios. First, their multimedia capability (video, audio, podcast) enables faculty members to showcase a full range of course practices and students' learning. Second, depending upon the format used (HTML or PDF), readers can move within the materials on their own—with the option to explore areas that interest them in greater depth.

What constitutes a course portfolio is as diverse as the teacher doing the teaching and the course being taught. Hutchings (1995) describes three common elements of a course portfolio: (1) explanation of the course design, (2) description of the enactment or implementation of the design, and (3) analysis of student learning resulting from the first two dimensions. Cerbin (1996) proposed one of the first course portfolio models for representing intentional inquiry into student learning. His prototype has been influential for many instructors (Hutchings 1998, Hutchings 2000). Bernstein et. al's (2006) approach is similar and consists of the following essential components:

- A reflective discussion of the content and goals of the course.
- A description of the plans to accomplish key objectives in student learning.
- Evidence, assessment, and reflection on student achievement toward these goals.
- A reflective narrative on the relation among the above three elements.

In this article, we outline four different types of course portfolios. Our discussion of a benchmark and inquiry portfolio matches many of the common characteristics of a course portfolio as described by others while our discussion of the concept and comprehensive portfolios offers new variations on these models. While the development of the four types of course portfolios are drawn from the efforts at our school, the models are transferable to any faculty member looking to explore and document their teaching and students' learning.

Benchmark Course Portfolio

A benchmark portfolio offers a snapshot of what occurred during a course. It allows a faculty member to highlight the goals of the course, methods for helping students to achieve them, and an assessment of student performance and learning in light of such goals. Common elements of a benchmark portfolio include a listing of the course goals, a summary of classroom methods, and evidence of student learning in meeting such goals. This type of portfolio is termed a "benchmark" because it offers a benchmark of student learning and classroom practices against which future offerings of the course can be compared. A benchmark portfolio is typically the first type of course portfolio that faculty create.

In writing about course goals, a faculty member introduces the course, the learning goals for it, and the rationale for those goals. The central questions to address are: What do I want students to know? And what do I want them to be able to do? The answer to these questions becomes complicated when a faculty member balances his or her expectations of the course with those of the department, college, general education program, and/or accreditation organization.

A faculty member next needs to reflect on how the course design (teaching methods, course materials, and course assignments) seeks to achieve the course goals. Common questions include the following: Why do you use the book you do? What happens in a typical class session? What are your expectations for student work outside of class? How are you assessing student learning? Why are these approaches effective?

The next component of a benchmark course portfolio is an assessment of how students have achieved the goals of the course. Often this is done by highlighting actual student learning from the course. Bernstein, et al (2006) point out that the challenge is to highlight a range of student learning for a variety of course activities but not offer a detailed review of each assessment moment from the course. For example, rather than highlighting each quiz in the course, a faculty member might present an aggregate summary (e.g., chart, average) for all quizzes to demonstrate overall student performance. Or one might select representative questions from the quizzes that illustrate the goals for the course (critical thinking, application of concepts, etc.) to illustrate the range of student response to such questions. It's important to note that a benchmark portfolio shouldn't highlight only the "good" student work from a course, but also work that does not meet a teacher's goals or learning objectives. Reflecting and writing about why a student paper received a "C" often helps faculty to better define criteria and expectations that they are able to cycle into future offerings of the course.

In assessing student learning, questions to focus on include: Is there evidence of students meeting the specific course learning goals? What criteria do you use to assess such understanding? How does the understanding represented by the student samples you present differ among students? How do these differences relate to the criteria you use in evaluating this work? And what is the range or distribution for learning within the class as a whole?

The concluding component of a benchmark course portfolio is reflective commentary on the match between the course goals and actual student learning. As part of this reflection, faculty often provide a detailed description of changes they will make the next time the course is taught and offer commentary on what they learned in the process of writing the portfolio. The following benchmark course portfolio, Link to Example Benchmark Portfolio (Powell 2004), was written by a faculty member describing a small, upper-level course in the School of Natural Resources. The faculty member provides a clear statement of course goals and considerable reflection on assignments and assessments. For instance, the faculty author collects and analyzes examination grades and group project results throughout the semester. He also compares student performance based on those who did and did not take the ecology prerequisite course and their different academic majors. In considering these differences in his student population, the faculty author developed a deeper understanding of factors that

contributed to their performance as well as ideas for revising future course offerings. This benchmark portfolio provides a useful example of how to use quantitative data for assessment, and it takes a scholarly approach to exploring students' learning in this course.

Inquiry Course Portfolio

In an inquiry portfolio, a faculty member focuses on answering a specific question or issue regarding teaching practices, course structures, and/or student learning. For example, an inquiry portfolio might explore the effectiveness of a semester project or the impact of essay examinations on students' learning. Writing an inquiry portfolio involves having a faculty member explore and evaluate a range of information concerning teaching—measuring the effectiveness of a specific classroom technique or a certain type of assessment, or addressing broader questions related to course structure and emphasis—and assess its impact on student learning. In doing so, faculty move beyond anecdotal or informal measures of inquiry to structured examinations of teaching and of student learning that then cycle back into their teaching and future offerings of a course. Sample inquiry portfolios have focused on exploring issues such as measuring the impact of class readings and activities on students' understanding of diversity; assessing students' ability to apply disciplinary theories to real world examples, and measuring the effectiveness of a student-directed grading rubric. A completed inquiry portfolio can serve as the basis for department discussions on student learning or the foundational material for a conference presentation or scholarly publication.

There are five major steps to writing an inquiry portfolio: formulating an inquiry question, developing an assessment strategy, teaching the course and collecting data, analyzing the data and evaluating its results, and cycling back the conclusions and recommendations into one's teaching. As such, writing an inquiry portfolio mirrors the approach one typically applies to disciplinary-based scholarly research that Glassick et al. (1997) describe: clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique.

An inquiry question might be broad and focus on a learning objective that spans the entire term (e.g., what is the impact of group discussions on course grades?) or might be more focused on a single assignment (e.g., impact of replacing a homework assignment with a group activity?). Developing the question might be as simple as asking, what problems do I have with this course? The term "problem" is in the positive sense that Bass (1999) ascribes: as an investigative possibility rather than as something negative that needs to be "fixed." The key is to pick a question that can be answered in the time frame of a term, academic year, or course module. Savory et al. (2007) comment that it is better to select a defined and focused question and to expand it in subsequent studies versus trying to answer all questions about the course in a single study. If a faculty member is struggling to think of a central question to explore, it is useful to return to the benchmark portfolio for the course as a starting place for such inquiry. Oftentimes the benchmark portfolio brings to the surface questions or issues that faculty can then develop more systematically for study. In other words, by providing a snapshot of overall student performance in a course, a benchmark portfolio often

helps faculty to identify specific areas in their courses that they wish to improve upon or that they wish to know more about.

With a defined inquiry question, the next step is to develop an assessment plan for answering it. Examples of questions to address include: What do you plan to change or study in the teaching of your course (e.g., specific methods, course materials or assignments, assessment of student work)? What do you predict will be the impact of such change? And how will you collect data to test this impact? A useful resource is Angelo and Cross's (1993) book which outlines different assessment strategies for the classroom.

Once a faculty member has an investigative plan, it is important to follow it while teaching the course. Collecting data and examples of student work can be challenging and faculty should explore approaches that can be integrated in their daily teaching lives to support such efforts (e.g., have student submit work electronically, have students collect all their graded coursework in a notebook which they turn in at the end of the term).

In analyzing the results, an important part of an inquiry portfolio is the reflection on what was learned through the process. As an example of an inquiry portfolio, Link to Example Inquiry Portfolio (Wentz 2006), the faculty author focuses on the service-learning project component of a large course taken by both engineers and architects. His course portfolio looks at the impact of team size and group member's disciplinary expertise and ability with respect to the final project. The electronic format of the portfolio allows him to include a range of course documents and photographs of his student's work. The faculty author concludes that the data demonstrates he should avoid assigning teams with only a single academic discipline present. As for answering his other inquiry questions, the faculty author comments that the data supports his hypothesis that there is an optimal team size, although the exact size is higher than he anticipated which will require him to explore his findings in subsequent course offerings.

Comprehensive Portfolio

A comprehensive portfolio presents a holistic overview of the iterative development, evolution, and current status of a course as a result of continued refinement. For faculty who routinely teach the same course each year, a comprehensive portfolio offers an opportunity to systematically track the impact of course revisions on student learning over time. Such portfolios can also offer faculty ways to demonstrate that their courses are current with respect to changing disciplinary or professional standards. Common elements of a comprehensive portfolio include the goals of the course, key changes that have occurred in the course over time, an assessment of student learning, and rationale for the current course methods and practices. Given its unique nature in relation to the specific course under review, there is no simple checklist for what additional items should or should not be included. The comprehensive portfolio offers an opportunity to capture the progression and evolution of a course over time—in terms of concepts and materials, teaching methods used, and student learning. Such a portfolio can also illuminate how a course evolves within a particular institution, to meet programmatic needs, to address changing student demographics, or to reflect revised departmental priorities.

In this example of a comprehensive portfolio, Link to Example Comprehensive Portfolio (Fritz 2005), the faculty author incorporates photographs and scanned images into her electronic portfolio to highlight the range of student work for her perceptual drawing course. Additionally, she includes detailed assignment handouts as a model for other faculty. The portfolio author comments:

> I teach in and coordinate a complex interdisciplinary program called Visual Literacy. The time I invested in preparing my comprehensive portfolio has paid off immeasurably. I direct new part-time and full-time faculty and GTAs who will be teaching in the program to view it before we discuss the course in detail. It also allows me to direct inquiries from faculty from other institutions. Viewers can learn about the course and its place in our program, read my teaching philosophy and goals and see what I actually do in the classroom including the students' work. This vital resource provides a foundation and a reference point for enhanced discussions about the program. D. Fritz (personal communication, 2009)

As this faculty author suggests, her comprehensive portfolio has helped other teachers, both locally and nationally, understand the work of her perceptual drawing course as well as its role within the larger Visual Literacy program. In this respect, her portfolio has been used to support teachers' professional development. This faculty author has also used her comprehensive portfolio as a basis for engaging in the scholarship of teaching by sharing her work at several disciplinary and scholarship of teaching and learning events and conferences.

Concept Course Portfolio

A concept course portfolio investigates a practice or issue in a course in terms of larger pedagogical concepts (e.g., general education, writing across the curriculum, problem-based learning) being addressed in higher education. It differs from a benchmark or inquiry portfolio in that the focus is to introduce a pedagogical concept and then highlight its use in the classroom. A concept portfolio can overlap with benchmark and inquiry portfolios in terms of what it measures in regards to its impact on student learning.

A concept portfolio generally consists of an introduction to the pedagogical concept (e.g., background of it, its history, its use), the faculty member's background and experience with the approach, an overview of the course and how the concept applies to it, demonstration of the concept in the course, an assessment of its impact on the course, and a discussion of resources or approaches for others looking to implement the concept.

Consider the use of classroom response systems ("clickers"). A concept portfolio would first introduce what clickers are, their history, and how they are used. Potentially this review would include references to existing literature about their use. Next, the portfolio would highlight the faculty member's use of clickers in the featured course. The portfolio would include some explanation or demonstration of the clicker's use. This explanation could take place in text, but could also be demonstrated by a video of how students use clickers for a particular classroom activity. The next portfolio section would

provide an assessment of how clickers have impacted student learning within the course. The portfolio could conclude with advice or resources for interested readers who might want to apply clickers in their own courses.

The following example of a concept portfolio, Link to Example Concept Portfolio (Ochoa 2005), introduces the concept of problem-based learning (PBL). In particular, this faculty author is interested in how to prepare future teachers to understand and educate students who have disabilities. She uses multi-media problem-based learning simulations to advance these goals. In this portfolio, the faculty author introduces PBL, talks about how it is used in her course, and uses videos to demonstrate actual student interactions within her course, and references existing literature on problem-based learning within teacher education.

Final Comments

In the past fifteen years, university faculty members have been called upon to document and make public their teaching in light of concerns about accountability for improving student learning. Course portfolios are a valuable medium for capturing the scholarly work of one's teaching by combining inquiry into the intellectual work of a course with a careful investigation of the quality of student understanding and performance. Course portfolios enable a faculty member to document the careful, difficult, and intentional scholarly work of planning and teaching a course. A course portfolio also opens the scholarship and the practice of teaching to the light of collegial comment; by soliciting the open and professional reaction of peers, a faculty member can obtain the kind of informative feedback that is needed for genuine development of new classroom approaches. As the portfolio examples featured in this article highlight, developing a course portfolio in an electronic format increases the accessibility for them to be shared, reviewed, and used by others.

Based on our work with faculty over the past decade, the time to develop a course portfolio is typically between 15 and 20 hours. The amount of time varies from person-to-person, though as we all tell our students, the more time you can commit, the greater the learning experience. Many faculty are hesitant to dedicate this much time for an activity that potentially will not be rewarded or recognized. Rather than viewing a course portfolio as "added work," though, a faculty member should consider it a powerful form of professional development for their teaching. Our experience is that by documenting classroom goals, classroom methods, and the resulting student learning, in subsequent offerings of a course, a faculty member often spends far less time in making course changes. As such, the up-front expenditure of time typically has a large payoff. Also, once a faculty member has gone through the process of writing a course portfolio, the inquiry process for their teaching is never the same–even if a faculty member doesn't develop another course portfolio, s/he will inevitably be asking the questions about teaching in a more reflective and systematic way. Beyond the formative and summative benefits for individual faculty development, Goodburn and Savory (2009) discuss how these types of efforts can also sponsor institutional innovation and assessment.

If we want students to be engaged in their learning, we need faculty engaged in their teaching. Through writing a course portfolio and then having it available for external

assessment by colleagues, a faculty member becomes a better teacher, enhancing the classroom experience for both current and future student learners in all of their courses. One faculty member described the benefits of writing a course portfolio in this way:

> I am now much more systematic in the design of course objectives and activities. More importantly, I feel more confident in my assessment techniques and therefore I am able to more accurately assess student outcomes and make appropriate changes. One of the best results is that it gets me excited and engaged in my courses, which obviously spills over into the classroom. J. Soliz (PRTP impact survey, 2009).

Interested readers are encouraged to visit the following website (www.courseportfolio.org) which hosts over 330 electronic course portfolios written by faculty for sharing, use, and review.

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