

“To Receive Full Credit, You Must Show Your Work”: Documenting Teaching Excellence

Julia Morse, Jung Oh

Kansas State University - Salina

Abstract

The use of a teaching portfolio to document one's teaching performance has been prominent in the literature for over ten years. However, recent searches for faculty in engineering technology and mathematics positions have revealed among candidates a minimal awareness of avenues for presenting evidence of teaching excellence. Resisters to the practice of teaching documentation argue that compiling (and reading) teaching portfolio material is too time-consuming. Yet without additional evidence of teaching performance, department chairs, promotion and tenure committees, and hiring committees are forced to draw conclusions of job performance based on little more than student opinions, hearsay, and hallway impressions. This paper revisits various types of teaching documentation for a teaching portfolio, vita, or promotion and tenure document. Examples are provided. Classroom outcomes assessment is discussed as a source of teaching documentation.

Introduction

Training programs and resources on teaching portfolios have become commonplace in most universities and colleges. Many universities have incorporated “teaching portfolios” into the language of their promotion and tenure process. Yet faculty have been slow to adopt the use of teaching portfolios. Recent searches for faculty in engineering technology and mathematics positions at Kansas State University yielded few applications which incorporated evidences of teaching performance beyond statements of classes taught and possibly statements of teaching philosophy.

Lack of historical use and examples of teaching portfolios has been partially responsible for a lack of adoption. Others resist consideration of a practice which seems to be yet another paperwork burden. However, the teaching portfolio should not be viewed as a rigid document requirement, but rather as a flexible opportunity for summarizing and documenting teaching either for performance evaluation or for teaching improvement. Material and structure can be selectively adapted and applied to fit the needs of the users.

The teaching portfolio allows the faculty member to reflect on individual teaching goals and methods and to exhibit evidences of successes and growth. It presents a summarized, yet holistic view of teaching performance with a focus on goals, process, and outcomes. This record

provides critical data for evaluators of teaching performance—data which cannot be provided by student evaluators or even peer assessments of classroom visits.

The reflective nature of the portfolio has the added benefit of promoting teaching improvement.

Teaching Portfolios as a Documentation Tool

Teaching portfolios have a two-pronged purpose: (1) Documentation for evaluation of teaching performance (commonly termed *summative evaluation*) and (2) a tool for improvement of teaching (*formative evaluation*).

Most often the impetus for a faculty member to develop a teaching portfolio typically comes from the need to provide more thorough support *documentation* for others to make evaluations of one's teaching performance. For example, the teaching portfolio (or pertinent sections) could be submitted for:

- Promotion and tenure considerations
- New position applications
- Annual evaluations
- Application for awards
- Grant applications (especially ones related to teaching)

The authors see an emerging application of the teaching portfolio: as a documentation tool for course-level assessment. Because of the teaching portfolio's unique ability to record the instructor's reflection and response to classroom assessment—that is, what worked and what didn't in a particular course—the teaching portfolio serves as a record of the process of “closing the assessment feedback loop” at the course level.

The teaching portfolio is recognized as a highly customizable tool to be adapted to the field and purposes in which it is applied. However, there are some elements commonly included in the portfolios. Many of these elements have long been suggested or required content for a promotion and tenure document:

- Statement of current teaching responsibilities
- Reflective statement on teaching goals, strategies, and methodologies
- Exhibit of teaching improvement activities
- Exhibit of curricular development, teaching materials,
- Evidences of student learning
- Student evaluation data (summary and discussion)
- Course syllabi (appendix)¹

Recommended length and formatting depends upon the purpose of the document and the needs and expectations of its audience. As a guideline, Seldin suggests that eight to ten pages, plus a selective appendix, is typically sufficient.²

Since statements should be adequately supported by documentation, the teaching portfolio should include an appendix of selected, representative evidences. Seldin provides examples and suggestions for appendix content. Diamond provides additional suggestions on documentation which establishes the quality and significance of teaching performance. To increase objectivity, evidences may include input from peers, supervisors, or students.³

Reluctance to Adopt Teaching Portfolios

A 1999 workshop group at Kansas State University compiled a list of arguments explaining some resistance to teaching portfolios:

- “Portfolios are too time-consuming to develop—time is better spent elsewhere.”
- “Portfolios are too time-consuming to evaluate.”
- “Portfolios are useless busywork.”
- “Portfolios are biased, giving just the spin of the faculty member; they do not provide a true view of teaching performance.”
- “Portfolios are a product; teaching is a process. Products are a poor representation of a process.”
- “Portfolios are difficult to weigh and evaluate. Faculty teaching approaches are variable and it is like weighing apples and oranges. It is better to just use student evaluations of teaching.”⁴

Another reason for slow adoption is a lack of historical examples and experience. Candidates for tenure often state that they used a previous candidate’s portfolio as a model for building their own. Reviewers who have always evaluated teaching in the absence of teaching documentation fall into the ways they have always managed to evaluate.

Many of the arguments against the use of teaching portfolios reflect a lack of recognition of key characteristics which separate the teaching portfolio from more traditional lists of teaching activities or teaching summaries:

- The teaching portfolio backs up statements with supporting evidences to document quality and significance of teaching.^{5,6}
- The teaching portfolio includes *reflective statements* which allow the instructor to communicate teaching goals and strategies and to reflect on processes and outcomes. Thus the teaching portfolio attempts to communicate the *process* of teaching, not just the products.

Diamond⁷ provides an excellent summary of why information in the reflective portion of the teaching portfolio is valuable to evaluators. It provides:

- A description of issues from the perspective of the faculty member.
- Rationale for goals and choices made.
- Circumstances mitigating the results.
- Significance of the work from the perspective of the faculty member.
- A wholistic, organized framework for the materials submitted.

Evaluation in the Absence of a Teaching Portfolio

Evaluation decisions made in the absence of a teaching portfolio may have some of the following sources of information from which to base the evaluation of teaching performance (depending upon the evaluation situation and availability):

- Student evaluations of teaching (SET's)
- Peer evaluation of teaching (based on classroom visits)
- Supervisor evaluation of teaching
- Pedagogically-based publications by the candidate
- Incidental exposure to the faculty member's classroom approaches through previous discussions or possibly presentations
- Secondary anecdotal reports (also known as *hearsay*)

Student Evaluations of Teaching (SET's) have become standard procedure for most institutions. Because these typically provide summary scoring, they become one of the easiest tools for a reviewer to peruse. This advantage also becomes a danger if the scores are not appropriately judged and weighed according to other factors.

The research on SET's does support the conclusion that, in general, the courses in which SET ratings are higher are the courses in which students learned more.^{8,9,10}

However, there are factors *unrelated to instructor teaching effectiveness* (and outside of the instructor's control) which have been shown to affect SET ratings. Cashin¹¹ has monitored the substantial research compiled on SET ratings since 1971 and has noted the following variables of concern when weighing an instructor's SET ratings:

- Student motivation or reason for taking the course. (Where students have prior interest in the subject matter, SET ratings tend to be higher.)
- Level of the course. (Higher level courses, particularly graduate courses, may yield slightly higher SET ratings.)
- Academic field. (Humanities and arts type courses yield higher ratings than social science type courses, and both of these yield higher ratings than math type courses.)^a

This variability makes it inappropriate to use SET ratings to compare teaching performance between two individuals without taking into consideration the influence of these factors. Those evaluators hoping to use SET scores as a simple numeric value to equalize comparisons between faculty need to take these factors into account. It turns out that even the numeric ratings provide an apples-to-oranges comparison.

^a SET ratings have also been shown to correlate to the personality traits of positive self-esteem and energy and enthusiasm. However, since these traits enhance actual teaching effectiveness, it is debatable whether they pose a concern to the validity of SET ratings.

The literature also makes it clear that students are not in a position to evaluate certain elements of faculty teaching performance. These general areas have been determined to include:

- Course design: its goals, content, and organization
- Methods and materials used in delivery
- Evaluation of student work (including grading practices)¹²

Hoyt and Pallett note that these categories include such aspects as the comprehensiveness or realism of course objectives, the degree to which course material presents a representative or biased view of the subject matter, the degree to which readings or other assignments are balanced and appropriate, currency of the content, and the validity of procedures for assessing student achievement.¹³

While student evaluations of teaching can contribute useful information to the evaluation of teaching performance, the literature has shown that it is not professionally responsible to rely almost solely on SET's for faculty evaluation.

Peer Evaluation of Teaching is widely valued but appears to be rarely practiced, largely because of the sheer time commitment involved when multiple faculty members must be asked to visit a class and write evaluations. Research has shown that results returned by individual peer reviewers can be highly variable and that evaluations do not correlate with teaching performance unless *multiple* peer evaluators are well trained to use the same evaluation tools and criteria.¹⁴ The heavy time investment required for good peer review models makes it impractical for most units to carry out *reliable* peer review for evaluative purposes.^b

Supervisor evaluations are typically required for P&T documentation. In many cases the supervisor shares the same struggle that other evaluators have in gathering sufficient data to make an informed evaluation about the faculty member's teaching. Furthermore, supervisor evaluation may be seen as similar to peer evaluation and should be weighed along with data from other reviewers or sources.

Incidental experience is anecdotal information which may point to areas of commendation or concern, but which only provide *suggestion* into the bigger picture of the candidate's teaching performance. Furthermore, anecdotal evidence is highly susceptible to the interpretation of the one sharing the information. When a Promotion and Tenure committee must share anecdotal experience, this testimony may not be documented for the candidate to later review for accuracy or to clarify the interpretation with background information. For this reason (and also to avoid other biases), the P&T procedures at some universities require that P&T decisions can only be based on information included in the P&T document.^c We do not accept anecdotal evidence as conclusive in our research; we should not be comfortable using anecdotal evidence to base decisions which affects the careers and lives of faculty members. Nor is it wise for candidates force reviewers to resort to incidental experience by providing them with little data to make an informed evaluation.

^b For formative purposes, peer review can be very useful.

^c Usually pertinent information can be added to the document if needed, but procedures must be followed to make sure that the candidate has access to review additions and respond as appropriate.

Incidental experience for one reviewer becomes secondary information, or *hearsay* to another reviewer. Another form of hearsay that is easy to creep into teaching performance evaluation is comments about the faculty member's teaching that have been heard from students.

In the absence of candidate-supplied teaching documentation, evaluators typically have little information on which to base their evaluations beyond student teaching evaluations, incidental experience and hearsay. Faculty who provide insufficient documentation to performance reviewers force their reviewers to turn to the remaining inadequate sources of information. Since it has been shown that student teaching evaluations do not describe the whole picture of teaching performance, this attitude is akin to going up before a jury with only a partial case presented by the defense. When one's career is on the line, this does not seem to be a wise strategy.

The teaching portfolio provides a flexible venue for telling one's story about teaching and weaving in the support evidences.

Possibilities for Making the Teaching Portfolio “Do-Able”

The following suggestions may help streamline the process of creating the teaching portfolio:

- Know your purposes.
- Customize the teaching portfolio to fit the intended purpose or purposes. Adopt and adapt only those sections needed for the purpose.
- Streamline and select content as much as possible. It is only meant to provide a summary and representative sample of your work.
- Build and improve the teaching portfolio as you go.
 - Take notes as you develop each course and observe the results. At the end of the semester, as you note what did and didn't work, jot down your ideas for improvements the next time the course is offered. Consider whether teaching portfolio sections pertaining to course reflection and improvement can be incorporated into program assessment documentation.
 - Use or create applicable portions of the teaching portfolio as you compile your annual self-evaluation materials.
- Often, only select sections of a teaching portfolio may be needed. For example:
 - Assessment summaries, reflection, and implementation notes for a specific course might be submitted with an annual self assessment report as an appendix.
 - A teaching portfolio section included within a vita may not require as much detail as a teaching portfolio for a promotion and tenure document.

To make the job of assessing your portfolio more approachable for evaluators:

- Streamline and select content as much as possible. It is only meant to provide a summary and representative sample of your work.
- Cite evidences, not just your personal opinions:
 - Provide samples of student work.

- Cite evidences, evaluations, and observations from outside sources, such as peer comments, peer reviewed publications on teaching topics, industry input, and awards.
- Cite student evaluation data.
- Collect student reflections on their own experience with innovations implemented in a course, and let their reflections speak as evidence of outcomes.
- Use appendicies (where appropriate) to organize representative samples.

Examples of Teaching Portfolio Sections

Figure 1 provides an example from Prof. Morse's promotion and tenure document. In this case, the teaching portfolio arrangement has been adapted to fit existing university requirements.

<p>Document Folder 2: Teaching</p> <ul style="list-style-type: none"> a. Teaching Portfolio Overview <ul style="list-style-type: none"> Teaching Responsibilities Statement of Teaching Philosophy and Strategies Training and Development Description of Efforts to Improve Teaching Teaching Goals for Next Five Years b. Summary and Analysis of Student Evaluation of Teaching <ul style="list-style-type: none"> Prior to Fall 1999 (Former Qualitative Form) Fall 1999 to Present (Standardized College Form) c. Peer Review Assessment of Classroom Teaching <ul style="list-style-type: none"> Peer Reviews of Classroom Teaching Description of Peer Review Process d. Peer Assessment of Course Design and Instructional Materials <ul style="list-style-type: none"> Peer Reviews of Course Design and Instructional Materials Description of the Peer Review Process e. Summary of Course Design, Curriculum Development, and Instructional Delivery Innovations <ul style="list-style-type: none"> Introduction Laboratory Development Course Design and Development Curriculum Development Instructional Delivery Innovations f. Summary of Student Advising and Mentoring Activities g. List of Teaching Awards and Recognition h. Externally Funded Assistance for Teaching Activities i. Industry Outreach Impact on Classroom Teaching

Figure 1. Sample teaching portfolio contents in promotion and tenure document.

Dr. Oh had practiced extensive course reflection for formative purposes. She summarized her course reflections into a summary document with the following sections (Figure 2):

Summary from Course Reflections	
I.	Courses (syllabus in Section X.C.1b)
II.	Curriculum Background and Prerequisite
III.	Placement Test and Exit Grade Analysis
IV.	Course Goals and Reflections
V.	Class Format and Assessment
VI.	K-State Online Hybrid Instruction: Most used Features, Goals, and Effects (1999-2003)
VII.	University Undergraduate Student Learning Outcomes (SLOs) at Kansas State University
VIII.	Major Teaching/Learning Strategy Changes over the Period
IX.	Plans for Future Improvements

Figure 2. Sections of course reflection summary document.

VI. K-State Online Hybrid Instruction: Most used Features, Goals, and Effects (1999-2003)		
Features Used	Instructor's Goal	Classroom Effects
<u>Module: exam</u> Previous exam and exam key	Provide study guideline; make students aware of exam format; share PDF files of instructor's hand written materials	Learners use for study to establish predictable exam setting; identify strong and weak areas
<u>Module: lab</u> Pre-lab information lab report sample, and lab exam	Offer orientation to pre-lab with graphic image of equipment and reaction stage, pre-lab quiz keys and lab report sample; PDF and JPEG examples	Learners find out what to explore, view equipment to use, check snap shots during the process, get help on how to investigate, and see sample report and lab exam.
<u>Module: class</u> in-class problem exercises and answer keys	Store to pre-view study and to retrieve after class; publish keys as just-in-time after classroom session to aid individual follow up	Learners work on during classroom activities; slower learners can retrieve answer to catch up, if missed during class
<u>Module: projects</u> samples by peer	Show samples of student creative project as show case	Students view the sample and get some ideas to expand

Figure 3. Table summarizing goals and outcomes of online-hybrid course material.

While a teaching portfolio is best understood when viewed as a whole, the examination of certain sections can stimulate ideas for content and formatting of summary information.

Figure 3 provides an example of the use of a table to structure and summarize various course material developments, their intended effects, and observed outcomes.

A similar example is provided in Figure 4, here using the reflective nature of the teaching portfolio to tie instructional improvement efforts to their intended goals and observed outcomes. Note that while evidences of positive results are mentioned, this section could have been improved if it had referred to documentation of the outcomes (perhaps in an appendix).

Critical Thinking in the Classroom, Spring 2000 to present

I employed “Effective Grading” and Active Learning techniques toward the overall goal of increased classroom time and student learning in the higher thinking levels (application, synthesis, evaluation levels of Bloom’s Taxonomy). “Effective Grading” involves appropriate grading schemes which help students gain their first-exposure, lower-level learning during their outside-of-class preparation and then invests classroom time in providing feedback to help students apply higher-level critical thinking to the material. These techniques have yielded both successes as well as extreme difficulties when applied to engineering technology students.

Results:

1. Students consistently perform well on critical-thinking exam questions.
2. Critical thinking questions take on larger portions of the exam as in-class coverage of this level of material increases.
3. Student preparedness for critical thinking discussions in class is greatly improved.
4. Active learning dialog in the Technical Problems Analysis class has greatly improved student attention and critical thought in the classroom. Students ask more in-class questions demonstrating analysis, synthesis, and evaluation-level thought rather than rote memory of steps to solving a problem.
5. A grading rubric was developed and successfully applied to evaluate the largely open-ended critical thinking questions on a CAD/CAM final exam.
6. Grading rubrics applied to student labwork have evolved to better promote desired learning behaviors.
7. Students in lab-based classes have at times demonstrated notable resistance to critical thinking objectives. Fall 2001 course expectation materials have better described and promoted critical thinking as a necessity for competitive four-year engineering technology graduates, as well as a course requirement. Students seem to be responding more positively. Peer reviewers verified the effectiveness of the critical thinking question-and-answer method used in class.

Figure 4. Section reflecting on instructional delivery innovation.

One of the major strengths of the teaching portfolio is its ability to help reviewers and the instructor see the larger picture of the instructor's professional performance. Figure 5's timeline not only summarizes major instructional initiatives, but displays their evolution. This information is another way of communicating the *process* of teaching and professional growth.

VIII. Major Teaching/Learning Strategy Changes over the Period	
1999	Developed CHM 210 diagnostic placement test Implemented K-State Online Adopted new textbooks to be same as Manhattan campus
2000	Introduced students' periodic table project and portfolio assignments Expanded in-class problem session and K-State Online features Utilized multimedia companion on textbook
2001	Administered IDEA evaluation and mid-semester survey Incorporated additional inquiry based lab activities Strengthened students' test correction process with conference
2002	Developed CHM 110 placement test Linked ABET learning outcomes into IDEA evaluation Extended students' peer review session such as lab reports revision
2003	Piloting "Writing Across Curriculum" collaboration with integrated assignments between CHM 110/111 with Technical Writing (ENGL 302) courses

Figure 5. Summary communicating the process of teaching strategy development and implementation over time.

Conclusion

While the documentation time may at first seem burdensome, the task of developing the teaching portfolio can be spread out over time, sections can be applied selectively, and section development can coincide with other activities. Content should be streamlined for ease of use to the reviewer, making use of selective use of support documentation, generally in an appendix.

The literature concludes that student evaluations of teaching are not able to fully depict the teaching role of the faculty member. Multiple sources of data are necessary for teaching performance evaluation, but difficult to obtain. The teaching portfolio concept provides a flexible means of communicating the integration of teaching goals, methods, and outcomes. The reflective process involved in the development of the teaching portfolio has the added benefit of focusing faculty on course improving opportunities and of documenting the assessment feedback loop at the course level.

References

- ¹ Seldin, Peter. *The Teaching Portfolio: A Practical Guide to Improved Performance and Promotion/Tenure Decisions*, 2nd ed. MA: Anker Publishing Co., Inc., 1997, pp. 8-9, 21-22.
- ² Seldin, p. 6.
- ³ Diamond, Robert M. *Preparing for Promotion and Tenure Review: A Faculty Guide*. Boston, MA: Anker Publishing Co., Inc., 1995, p. 23.
- ⁴ Burtis, John O. "Problems with Portfolios: Fall 1999," *Swap Session Newsletter*, No. 13, Swap Session Date: Sept. 13 1999, Kansas State University, JOBurtis@ksu.edu. (The comments in quotation marks are not verbatim quotations; they have been summarized by the authors. They are presented in quotations marks to reinforce their identity as comments made, not statements of fact.)
- ⁵ Seldin, p.20.
- ⁶ Diamond, pp. 15-20, 23.
- ⁷ Diamond, p. 24.
- ⁸ Cashin, William E. "Student Ratings of Teaching: The Research Revisited," Idea Paper No. 32, Center for Faculty Evaluation and Development, Kansas State University, September, 1995, http://www.idea.ksu.edu/papers/Idea_Paper_32.pdf, accessed June 9, 2004.
- ⁹ Felder, Richard M. "What Do They Know Anyway?" *Chemical Engineering Education*, Vol. 26 No. 3, Summer 1992, pp. 134-135, <http://www.ncsu.edu/felder-public/Columns/Eval.html>, accessed June 11, 2004.
- ¹⁰ Yunker, Penelope J; Yunker, James A. "Are Student Evaluations of Teaching Valid? Evidence from an Analytical Business Core Course," *Journal of Education for Business* Vol. 78, No. 6, Jul/Aug 2003, p. 313-317.
- ¹¹ Cashin.
- ¹² Kiez, L. & Waggoner, M. D. *Collaborative Peer Review: The Role of Faculty in Improving College Teaching*. ASHE-ERIC Higher Education Report, No. 2. Washington, D. C.: The George Washington University Graduate School of Education and Human Development., 1994, cited by Hoyt, Donald P. and Pallett, William H. "Appraising Teaching Effectiveness: Beyond Student Ratings," IDEA Paper #36, Idea Center, Kansas State University, November 1999, http://www.idea.ksu.edu/papers/Idea_Paper_36.pdf, accessed June 9, 2004.
- ¹³ Hoyt, Donald P. and Pallett, William H. "Appraising Teaching Effectiveness: Beyond Student Ratings," IDEA Paper #36, Idea Center, Kansas State University, November 1999, http://www.idea.ksu.edu/papers/Idea_Paper_36.pdf, accessed June 9, 2004.
- ¹⁴ Hoyt and Pallett.

Suggested Resources on Teaching Portfolio Preparation

Seldin, Peter. *The Teaching Portfolio: A Practical Guide to Improved Performance and Promotion/Tenure Decisions*, 2nd ed. MA: Anker Publishing Co., Inc., 1997.

The most popular guide for development of a teaching portfolio, providing basic recommendations and many examples of teaching portfolios from faculty in various fields and institutions.

“The Teaching Portfolio,” Center for Teaching Excellence, Iowa State University, <http://www.cte.iastate.edu/campusprograms/portfolio.html>, accessed June 11, 2004.

This site provides a well organized list of ideas for teaching portfolio content inclusion, along with an annotated list of suggested resources.

Diamond, Robert M. *Preparing for Promotion and Tenure Review: A Faculty Guide*. Boston, MA: Anker Publishing Co., Inc., 1995.

This brief, quick-to-read guide emphasizes ways to emphasize *quality* and *significance* of work in your documentation.

Rodriguez-Farrar, Hannelore B. “The Teaching Portfolio.” The Harriet W. Sheridan Center for Teaching and Learning, Brown University, http://www.brown.edu/Administration/Sheridan_Center/publications/teacport.html, accessed June 11, 2004.

This web resource provides a summary largely based on Seldin’s work, including exhibits adapted from the Tables of Contents of teaching portfolio examples selected from his book. This site would be useful for someone waiting to get a copy of Seldin’s book—or a taste of some of the examples included.

Biographical Information

JULIA MORSE

Associate Professor teaching Mechanical Engineering Technology at Kansas State University’s College of Technology and Aviation in Salina, CMfgE, CEI, M.S. Manufacturing Systems Engineering. Prof. Morse has interviewed Promotion & Tenure (P&T) reviewers and researched P&T procedures toward continuous improvement of the process at both the University of Nebraska and Kansas State University.

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Dr. Oh was a College of Technology and Aviation pioneer in the use of an exhaustive teaching portfolio for her promotion and tenure documentation. She served the College Assessment Task Force and University Early Adopters Work Group on assessment and participated in the 2004 Wakonse Conference on College Teaching. Her interests in collaborative scholarship on teaching include online hybrid instruction and cross-curricular innovation.