Creating a Culture of Evidence in Nursing Education Using Student Portfolios

Jeanette Rossetti*  Nancy Oldenburg†  Julie Fisher Robertson†
Sharon M. Coyer**  Mary E. Koren††  Bradley Peters‡‡
Connie Uhlken§  Kathleen Musker¶

*Northern Illinois University, rossetti@niu.edu
†Northern Illinois University, nancyo@niu.edu
‡Northern Illinois University, julierob@ameritech.net
**Northern Illinois University, sharonmarie77@sbcglobal.net
††Northern Illinios University School of Nursing, mkoren@niu.edu
‡‡Northern Illinois University, bpeters@niu.edu
§Northern Illinois University, cuhlken@niu.edu
¶Northern Illinois University, kmusker@niu.edu
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Jeanette Rossetti, Nancy Oldenburg, Julie Fisher Robertson, Sharon M. Coyer, Mary E. Koren, Bradley Peters, Connie Uhlken, and Kathleen Musker

Abstract

There has been a growing interest in the use of portfolios to assess nursing student progress in areas such as critical thinking, problem solving, and communication. The data obtained from student portfolios can be used to improve undergraduate nursing curricula; however in order for change to occur, closing the assessment feedback loop is essential. The portfolio program of one Midwestern school of nursing has successfully used portfolio evidence to effect undergraduate curricular change. This portfolio program, under the direction of the school’s Portfolio Subcommittee, involves active participation by students, faculty and administration. Examples of curricular improvements based on portfolio findings included increasing rigor in course assignments, improving student self reflection, promoting students’ ability to write in the discipline, and maintaining writing assignments in larger classes.

KEYWORDS: nursing, portfolio, assessment, evidence
The use of authentic assessment methods is on the rise in higher education and is consistent with the increased national focus on assessment methods that promote a culture of evidence and improved educational practices (American Association of Colleges of Nursing [AACN], 2009; Abate, Stamatakis, & Haggett, 2003; Braskamp & Schomberg, 2006; Lombardi, 2008; Wilhelm et al., 2006). Student portfolios are a form of authentic assessment that provides direct evidence of mastery of complex skills and abilities (Mueller, 2011). Portfolios also have been described as a powerful program assessment tool to encourage best practices in teaching (Bowers, 2005; Goldsmith, 2007; Wilhelm et al.; Willard-Traub, Decker, Reed, & Johnston, 1999).

According to leading assessment experts, “…the portfolio brings…the teaching process…right into the center of the assessment process” (Elbow & Belanoff, 1997, p. 32). Assessing portfolio artifacts in relation to program outcomes gives faculty the opportunity to collectively determine strengths and weaknesses of the curriculum and evaluate how adequate their assignments are in helping students accomplish program objectives (Goldsmith, 2007; Willard-Traub et al., 1999). Thus, portfolio assessment promotes faculty collaboration and self-assessment of teaching (Willard-Traub et al.) and ultimately can change the way faculty teach and students learn. However, in order for real curricular change to occur, faculty as a whole need to actively participate in the assessment process (Abate et al., 2003; Braskamp & Schomberg, 2006; McCready, 2007). Faculty coming together on a regular basis to assess and score portfolios is a key factor in developing and maintaining a successful portfolio program (Robertson et al., 2010).

A culture of evidence is created when educational programs not only collect and analyze assessment data, but also use the data to improve curricula and teaching practices. This process is referred to as ‘closing the assessment feedback loop’ (Wright, 2008). Accrediting bodies in nursing education require that nursing programs demonstrate that assessment data are used to make curricular improvements (AACN, 2009; National League for Nursing [NLN], n.d.). Therefore, closing the assessment feedback loop needs to be the ultimate goal of nursing education assessment programs. Assessment has no value if the data are not used for program improvement.

There is a growing interest in the use of portfolios in undergraduate nursing programs for assessment purposes. A review of the literature indicated that most of the published articles on portfolio assessment in schools of nursing focused on using portfolios as a method to assess individual course outcomes and/or student competencies (Chabeli, 2002; Dolan, Fairbairn, & Harris, 2004;
Emden, Hutt, & Bruce, 2004; McCready, 2007; McEwan & Taylor, 2007; McMullan et al., 2003; Schaffer, Nelson, & Litt, 2005; Spence & El-Ansari, 2004; Taylor, Stewart, & Bidewell, 2009; Tiwari & Tang, 2003). Five articles were found that focused on using student portfolios to assess curricular effectiveness on a program-wide level (Alexander, Craft, Baldwin, Beers, & McDaniel, 2002; Karlowicz, 2000; Janzi & Austin, 2005; Kear & Bear, 2007; Tracy, Marino, Richo, & Daly, 2000). The authors of two of these articles indicated that portfolio findings were used for program changes, but did not give details about what changes were implemented (Kear & Bear; Tracy et al.). Three articles described portfolio programs that were in the implementation phase (Janzi & Austin) or pilot projects (Alexander et al.; Tracy et al.). No publication was found in the nursing literature that addressed how portfolio assessment data was used to make curricular changes or specific ways to facilitate a culture of evidence.

The purpose of this article is to describe how the faculty of one Midwestern school of nursing established a culture of evidence and used portfolio data to effect undergraduate curricular change. Key features of the portfolio program that supported and sustained a culture of evidence and several curricular improvements are discussed.

KEY PROGRAM COMPONENTS SUPPORTING AND SUSTAINING A CULTURE OF EVIDENCE

The components of the portfolio program that supported and sustained a culture of evidence include (1) a dedicated and experienced oversight committee, (2) portfolio assessment experts to guide the process, (3) mid-program review of portfolios, (4) active involvement of all stakeholders, (5) well-trained faculty reviewers, (6) portfolio assessment each semester, (7) post-assessment faculty discussion of findings, and (8) portfolio assessment follow-up to close the assessment feedback loop. More information about this successful portfolio program can be found in other publications (Askins, 2008; Robertson et al., 2010).

A Dedicated and Experienced Oversight Committee

Creating a culture of evidence began with having a dedicated and experienced oversight committee, which is strongly recommended in the literature (Abate et al., 2003; Dannefer & Henson, 2007). The Portfolio Subcommittee members spent countless hours on program development, implementation, and improvement. Their commitment, competence, perseverance, and enthusiasm were essential in establishing and maintaining faculty and student participation.
The Portfolio Subcommittee is responsible for coordinating all aspects of the portfolio program—including the formal assessment of portfolios—and works closely with its parent committee, the Curriculum and Evaluation Committee. The Subcommittee developed the overarching vision for the portfolio program and a detailed program proposal. The proposal was presented to nursing faculty in both written and PowerPoint presentation formats, after which it was unanimously approved. The portfolio program officially began in the fall of 2003.

The Portfolio Subcommittee consists of faculty, student, and administrative representatives and a portfolio assessment consultant. Membership is voluntary, with the exception of one elected member from the Curriculum and Evaluation Committee who serves as a liaison between the two committees. A volunteer membership helps to ensure that members are committed to the portfolio program and dependable in implementing established protocols. Members are requested to stay on the subcommittee for at least three years for continuity purposes and to develop expertise in portfolio assessment. New members are added to the subcommittee on a regular basis, which adds to the number of faculty members who have an in-depth understanding of the program.

**Portfolio Assessment Experts to Guide the Process**

The Portfolio Subcommittee was fortunate to find a portfolio assessment consultant to guide the development, implementation, and maintenance phases of the program. This consultant became a member of the Portfolio Subcommittee when the portfolio program was a mere idea, and he continues to be an active subcommittee member.

The consultant conducts the portfolio assessment sessions and moderates the faculty discussion of findings. Having an impartial expert working with faculty on a regular basis had a huge impact on faculty buy-in and participation. Faculty members have come to trust the consultant’s judgment and expertise, and they look to him for honest feedback. Faculty evaluations of the portfolio assessment sessions often include praise for the consultant’s contributions. Faculty reviewers have commented on how much they appreciate the consultant’s expertise in facilitating and managing the assessment sessions and his expert portfolio knowledge.

Another consultant position was created on the Portfolio Subcommittee for the purposes of maintaining program continuity and ensuring that the vision, goals, and established protocols were carried on into the future. This position is filled by a nursing faculty member who has long-term leadership experience with
the portfolio program. The nursing faculty consultant not only has the historical background, but also helps the subcommittee with long-term planning and the big-picture perspective.

**Mid-Program Review of Portfolios**

The portfolio proposal that faculty unanimously approved included the provision that portfolio assessment would be done mid-program on portfolios submitted from all undergraduate nursing students at the end of the junior year (third semester in the nursing program). The mid-program review provides faculty with valuable data about the effectiveness of the foundational nursing courses in preparing students for their important senior year. These data are then used to make changes in the nursing curriculum. Several examples of curricular change are provided later in the article.

The mid-program review also gives students data for self improvement, which adds to their curricular experience. Students receive written feedback on their strengths and weaknesses related to the criteria on the portfolio scoring rubric, and they are encouraged to make improvements in the weaker areas during their last year in the nursing program (Robertson et al., 2010).

**Active Involvement of all Stakeholders**

The success of the portfolio program described in this article was dependent upon the active involvement of students, faculty, and administration. To establish and maintain involvement and support, the developers of the portfolio program were careful to involve all stakeholders in the creation and implementation of the program (Robertson et al., 2010).

**Students.** Students receive an overview of the portfolio program at an orientation session held before the first semester of the nursing program. More details about the portfolio program are given to students in a first semester nursing course; this information also is incorporated into the syllabi of all first and second semester nursing courses. At the beginning of the third semester in the nursing program, students receive detailed directions about submitting their portfolios and a copy of the scoring rubric. They are encouraged to use the rubric as a guide in choosing their portfolio documents.

Portfolio content includes a self-reflection cover letter and three previously-graded written assignments. In the cover letter, students are asked to indicate how the chosen assignments demonstrate their abilities in relation to the
nursing program’s three outcome criteria: critical thinking, writing, and therapeutic interventions. Students also are asked to reflect on their overall professional strengths and weaknesses. Thus, self reflection is an integral part of the portfolio process. For the three written assignments, students are asked to submit work they consider to be the best examples of their abilities in the three outcome areas. They are encouraged to revise their portfolio documents according to changes recommended by their instructors before they submit their portfolios. The process of choosing and revising portfolio documents gives students the opportunity for further learning and growth, and the process of self reflection contributes to developing skills for life-long learning and success in nursing.

Students are asked to complete an evaluation of the portfolio experience, and this feedback is used by the Portfolio Subcommittee to improve the program. For example, many students expressed concerns about the submission time of the portfolio, which was at the end of the third semester of the nursing program during finals week. The subcommittee piloted a new date for submission, which was the second week of the fourth semester. The vast majority of students indicated that this time change made submitting portfolios less stressful, enabled students to revise their work, and allowed them to include third semester assignments. As a result of this feedback, the portfolio submission time was changed to the beginning of the fourth semester.

One of the most important factors that contributed to establishing and maintaining a culture of evidence was student involvement on the Portfolio Subcommittee. Each semester two-to-four students volunteer to participate as subcommittee members. These students’ input into subcommittee discussions has helped faculty understand curricular issues from a student perspective. Student members also are exceptional ambassadors for promoting buy-in from their classmates. They support them through the process, help clarify misunderstandings, and share their own insights about portfolio assessment. Students also help their peers see the big picture of how their portfolios contribute to the overall success of the nursing program (Askins, 2008).

Faculty members also recognize the valuable contributions of student subcommittee members. During the spring 2010 faculty discussion of portfolio findings, faculty reviewers concluded that there was much data indicating that students recognized the importance of their portfolios, which faculty felt was influenced by the outstanding efforts of student members on the Portfolio Subcommittee.
Faculty. Portfolio assessment is considered to be important faculty service related to curriculum development and improvement; therefore, all faculty members are expected to be involved in the reading and scoring of portfolios. This philosophy was essential in establishing a culture of evidence. Portfolio assessment is conducted during a regularly scheduled faculty meeting. The time commitment for each faculty is typically less than three hours each semester for this assessment activity. The vast majority of faculty members have consistently participated in the portfolio assessment sessions since the program’s inception in 2003. This strong evidence of faculty buy-in is reflected in comments by faculty participants who have indicated that initially they were not enthusiastic about the program, but after participating as faculty reviewers, they came to understand the value of portfolio assessment and now support it (faculty evaluation of portfolio assessment session, spring 2010).

Administrators. Departmental administrators actively participate as portfolio reviewers, and at least one administrator attends each assessment session. This visible administrative support has been critical to establishing a culture of evidence and has not gone unnoticed. For example, in the faculty evaluation of the spring 2010 portfolio assessment session, reviewers praised the participation from administration and the excellence of the session.

One administrator also serves on the Portfolio Subcommittee in an ex-officio capacity. This member brings an important administrative perspective to subcommittee deliberations, and her support of the program has played an integral role in promoting faculty buy-in and participation.

Well Trained Faculty Reviewers

The Portfolio Subcommittee received two years of university funding to train faculty to do large-scale portfolio assessment in faculty teams (Peters & Robertson, 2007). The training was conducted by the portfolio consultant and consisted of several “norming” sessions for faculty to become comfortable using the scoring rubric. In each of the norming sessions, faculty scored the same three practice portfolios and then shared their scores with each other. According to assessment experts, reading and scoring the same portfolio documents as a group improves portfolio reviewer confidence using the scoring rubric (Perlman, 2002).

The faculty training also included a workshop that simulated an actual portfolio assessment session with faculty assessing a cohort of portfolios in faculty teams. These portfolios were provided for training purposes by nursing students in a third semester nursing class. This simulation gave faculty beginning
experience with the portfolio program that was officially starting the following semester. The literature indicates that faculty members are more willing to support assessment programs when they are well trained and feel competent in their assessment role (Wetzel & Studdler, 2005). Well-trained reviewers are essential for providing quality portfolio evidence (Dannefer & Henson, 2007).

The team approach also supported a culture of evidence. Working in teams encouraged faculty members to collaborate, learn from each other, and be part of a common purpose.

**Portfolio Assessment Every Semester**

A key aspect of the portfolio program that had a large impact on establishing a culture of evidence was the decision to do portfolio assessment every semester. Regularly-scheduled assessment promotes faculty expertise and confidence in scoring portfolios and increases the reliability of results. Having a core of experienced reviewers also helps new faculty members learn the assessment process and become confident reviewers more quickly.

**Post-assessment Faculty Discussion of Portfolio Findings**

When faculty reviewers complete their assessment of portfolios, they participate in a discussion of the strengths and weakness of the student cohort in relation to the criteria on the portfolio scoring rubric. The discussion is recorded and transcribed and kept as qualitative evidence for analysis and follow-up. These faculty discussions are powerful drivers for curricular improvement by giving faculty the opportunity to assess not only the undergraduate curriculum, but also their own teaching. These sessions are the heart of this nursing program’s portfolio assessment process. During these discussions, faculty members have indicated what they could do and/or have done in their classes to improve the curriculum based on portfolio findings—which is a compelling and recurrent example of closing the assessment feedback loop. Experts indicate that frequent and ongoing discussion of assessment findings by faculty has a strong impact on improving curricula and teaching practices (Abate et al., 2003; Braskamp & Schomberg, 2006; McCready, 2007).

Portfolio Subcommittee members are actively engaged in the faculty discussion of findings. These discussions give the subcommittee an opportunity to acknowledge faculty efforts and praise colleagues for addressing shortcomings in the curriculum that were evident in previous assessment sessions. The portfolio consultant, who moderates the assessment sessions, also keeps faculty and
administration abreast of the big picture and how this program compares to others. He has pointed out that, unlike other universities and colleges where faculty have no say in what is assessed in their programs, this portfolio program is successful because nursing faculty work well together and the majority of them participate in the assessment and support the program (post-assessment faculty discussion transcript, fall 2010). The consultant also reported that nursing’s portfolio program was being used as a model for another program on campus. He indicated that many of the excellent protocols and procedures in the nursing portfolio program facilitated the successful implementation of portfolios in this other department. This kind of validation promotes faculty pride and support. For example, faculty reviewers have indicated in their faculty evaluations how impressed they were that another academic department was using nursing’s portfolio model (faculty evaluation, spring 2009).

An evaluation of the portfolio assessment session is completed by faculty participants, and they consistently identify discussion of portfolio findings as the most beneficial aspect of the assessment process. Faculty reviewers have written that portfolio assessment allows them to see how their courses and assignments contribute to the overall curriculum and that participating in portfolio assessment is a beneficial educational experience (faculty evaluation, spring and fall 2010). Faculty comments also indicate that they learn from each other on how to construct course assignments. For example, several reviewers wrote that being exposed to assignments from other courses helped them improve their own assignments and grading rubrics (faculty evaluation, spring and fall 2010).

**Portfolio Assessment Follow-Up**

The Portfolio Subcommittee is responsible for gathering and analyzing all portfolio evaluation and outcome data, and the results are forwarded to the Curriculum and Evaluation Committee for follow-up. This step is a crucial component of the assessment feedback loop because the Curriculum and Evaluation Committee is the nursing program’s entity that uses program assessment data to make important curricular recommendations, which are then brought to the faculty as a whole for their consideration and vote. As a result, improvements in the curriculum occur based on assessment data. In addition to this formal mechanism for curricular change, the ideas generated from the post-assessment faculty discussions have been used by faculty to change how they teach their classes. Several curricular improvements are described below.
USING PORTFOLIO ASSESSMENT EVIDENCE TO IMPROVE THE NURSING PROGRAM

The portfolio program described in this article was able to close the assessment feedback loop in only three years and has maintained a culture of evidence since 2006. For example, qualitative evidence from the spring 2006 post-assessment faculty discussion transcript included observations from the portfolio consultant that faculty participants were demonstrating buy-in and a broader perspective of program assessment. The spring 2010 faculty discussion transcript indicated that portfolios contained well-constructed assignments based on the portfolio rubric and that there was clear evidence that faculty and students supported this assessment program.

Portfolio evidence was the impetus for a number of curricular improvements. Examples include increasing the rigor of course assignments, improving student self-reflection, promoting APA format and writing skills, and continuing substantive writing assignments in large classes.

Increasing the Rigor of Course Assignments

The first example of changes made to the nursing curriculum involves assignment revisions by faculty. Within the first three years of the portfolio program, trend analysis of post-assessment faculty discussion transcripts and portfolio scores indicated that students at the end of the third semester of the nursing program were weak in the intervention and evaluation aspects of the nursing process. Because the vast majority of faculty members participated in the portfolio assessment sessions, they were well aware of these findings. As a result of this active faculty participation, an exciting thing happened: faculty began using portfolio evidence to make improvements in their course assignments! This occurrence was first noticed during the spring 2007 portfolio assessment session. Reviewers observed that faculty were making changes in how they were teaching based on portfolio findings and more intervention and evaluation experiences were built into assignments that students were including in their portfolios. In subsequent portfolio assessments, more student portfolios met or exceeded expectations on the scoring rubric in the areas of interventions and evaluation. The ultimate goal of good assessment was occurring – the assessment feedback loop was being closed!
Improving Student Self-Reflection

Portfolio data also indicated that student self-reflection was an area that needed improvement, and faculty reviewers suggested that the guidelines for the student self-reflection cover letter be improved. The Portfolio Subcommittee updated the guidelines for the cover letter and included specific directions for how to do the self-reflection. Also, quite a few faculty members stated that they were including more self-reflection requirements in their assignments based on portfolio evidence (faculty evaluations, spring and fall 2009; spring and fall 2010). In subsequent assessment sessions, portfolio cover letters were found to be substantially clearer and more detailed in pointing out why the documents were chosen, and portfolio artifacts indicated that students were doing a better job of reflecting on their growth in the program (post-assessment faculty discussion transcripts, spring and fall 2010; fall 2011.)

Promoting APA Format and Writing Skills

Another portfolio assessment finding indicated that students were having problems with using APA format for writing assignments, which was included in the fifth scoring rubric criterion. In post-portfolio assessment discussions, faculty addressed the need for promoting the appropriate use of APA format while also focusing on the development of writing skills and nursing documentation requirements. The Portfolio Subcommittee recommended that (a) APA guidelines be incorporated into the master syllabi of all courses, (b) APA resources be more readily available to students via the school website and the university’s writing center, and (c) a one-credit hour course on the use of APA format be offered to students. These recommendations were approved and implemented by the Curriculum and Evaluation Committee. Eventually the use of APA guidelines was removed from the portfolio rubric because of the wide variation in faculty expectations related to APA format. The focus of the fifth criterion was then shifted to the need to meet professional expectations of readers in the field of nursing, which included adequate referencing, grammar, and spelling, and the use of professional language.

Although student writing issues continue to be a problem in some portfolios, there is recent evidence of improvement in this area. This may be due to faculty efforts to increase the focus on writing expectations in the discipline. Several faculty reviewers commented on their faculty evaluation forms that they planned to include or had included more emphasis in their syllabi on the importance of students using professional language and adequate referencing from scientific sources (spring and fall 2009; spring and fall 2010). The spring
2011 faculty evaluations showed that faculty members were continuing to emphasize the importance of students supporting their arguments with evidence, including adequate and appropriate references, and using professional language in their writing.

**Continuing writing assignments in large classes.** As nursing class sizes increased, concerns were expressed during post-portfolio assessment faculty discussions about the impact larger classes would have on writing assignments. Faculty worried that writing assignments would be discontinued in courses that had large student enrollments. In response to this issue, the Curriculum and Evaluation Committee surveyed faculty about their use of writing assignments. Based on survey findings, an expert in developing short writing assignments presented a workshop to help faculty prepare succinct, but valuable, writing assignments for students. Subsequent portfolio assessment data indicated that some faculty teaching large classes had developed shorter, but substantive, writing assignments. During the spring 2010 portfolio assessment session, reviewers observed that faculty were continuing to include a variety of writing assignments in both clinical and theory courses. Despite large class sizes, writing assignments remain an important part of the undergraduate nursing curriculum.

**CONCLUSION**

Using assessment evidence to improve curricula is essential in nursing education because nursing students need adequate classroom and clinical experiences to become competent graduates. Through active involvement of faculty, students, and administration, and with expert guidance from the Portfolio Subcommittee, the nursing program highlighted in this article was successful in utilizing data from the assessment of student portfolios to effect positive changes in the nursing curriculum. As a result, students in this undergraduate program received enhanced educational experiences. Closing the assessment feedback loop is the hallmark of successful assessment programs and a key characteristic of quality educational programs. It also is a compelling testament to the willingness of faculty to work together to improve the curriculum and use assessment data to change their teaching practice.

**REFERENCES**


