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Improving portfolio assessment: Addressing challenges in transition to Eportfolio.

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Improving Portfolio Assessment: Addressing Challenges in Transition to Eportfolio

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ABSTRACT

Background: As health care education programs adopt electronic portfolios (eportfolios), a midwestern university baccalaureate nursing program faces challenges in transitioning from a 25-year-old paper-based system to eportfolio. **Method:** Process improvements and faculty development were implemented through collaboration with the information technology (IT) department and the involvement of students as ambassadors. Pre- and posttransition surveys and portfolio benchmarks were used to evaluate the efficacy of the new eportfolio system. **Results:** Results of faculty and student surveys revealed improved positive experiences regarding the value, clarity, and ease of use of the eportfolio system. Benchmark deficits decreased from six of eight portfolio criteria in Fall 2017 to none in Fall 2019. **Conclusion:** Buy-in through faculty and student involvement, along with a user-centered design, are essential for a successful eportfolio transition. Student and faculty engagement would be secured when they are well-informed in the transition process. [*J Nurs Educ.* 2020;59(12):705-708.]

In nursing education, portfolios have been increasingly used as a tool to display evidence of students' best academic work and to demonstrate their competencies developed over time (Green et al., 2014). Portfolios also help students scrutinize their academic progression by offering them an opportunity to document, reflect on, and showcase their preprofessional accomplishments (Gwozdek et al., 2013). From a curricular perspec-

tive, portfolios provide educators with formative and summative assessment data to measure their respective program's achievement of student learning outcomes (SLOs) and accreditation standards (i.e., portfolio assessment [Hickey et al., 2017; Rosetti et al., 2012]). Because of advances in information technology (IT) and the incorporation of informatics into nursing curricula (American Association of Colleges of Nursing [AACN], 2008; National League for Nursing [NLN], 2008), a midwestern baccalaureate nursing program transitioned from a paper-based system to an electronic portfolio (eportfolio) system. Other measures were also implemented during the transition to improve the portfolio assessment program. This article presents the challenges encountered and the strategies used in the program's successful transition to an eportfolio system. The lessons learned from the innovative transition could benefit other schools in improving their own portfolio assessment programs.

Background

Portfolios have been an integral part of program assessment in this specific nursing program for nearly 25 years. However, as the Portfolio Committee began planning for the eportfolio transition, there was a noticeable decline in the quality of student portfolios. Therefore, planning included a comprehensive examination of the portfolio program to address the problem.

The Portfolio Assessment Process

At the end of their last semester in the program, students are required to submit a portfolio consisting of a minimum of four of their best assignments from various courses throughout the program. The portfolios should also include a cover letter explaining how those premier assignments evidence their achievement of the program's SLOs. The average size of graduating classes is around 60 students; the past four semesters have seen a low of 52 students and a high of 69. Out of all the portfolios submitted each semester, half of the portfolios, or a minimum of 30, are randomly selected by the faculty for portfolio assessment. The 30 portfolios minimum was based primarily on the availability and workload capacity of portfolio reviewers and, to a lesser extent, by historical minimum sample size convention.

The portfolios are evaluated according to a rubric with criteria that reflects the program's SLOs, which were established according to the AACN baccalaureate *Essentials* (2008) and Quality and Safety Education for Nurses (QSEN) competencies (2020). Each portfolio is scored on each criterion according to a

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Likert-type scale by two faculty reviewers. The faculty scores are then averaged to determine the actual scores for the portfolio. Portfolios are not included in student grading (the contents of which have already been graded in their previous courses), but as previously mentioned, they are a requirement in one of their last remaining courses in the program. A benchmark was created—requiring that 85% of portfolios meet the corresponding criteria—to determine whether students are meeting SLOs. This serves to identify curricular gaps and promote the development of curricular interventions to close the assessment feedback loop. Thus, portfolio assessment has been vital in program performance and the accreditation process for this program (Hickey et al., 2017; Rosetti et al., 2012).

Electronic Portfolios

With advances in IT and the recommendation to incorporate informatics into nursing curricula by both the NLN (2008) and AACN (2008), a growing number of nursing programs have adopted portfolios with a particular interest in the electronic format (Riden & Buckley, 2016; Wassef et al., 2012). It is well-perceived that the electronic format of portfolios would increase students' interactions with IT and ease their process of collecting, maintaining, and updating course artifacts. It would also provide greater portability and accessibility for their portfolios (Anderson et al., 2017). With these considerations, the nursing program decided to transition from the paper-based system to eportfolios.

Barriers to Effective Portfolio Assessment

Between the Spring 2016 and Fall 2017 semesters, student portfolios increasingly failed to meet the program's benchmark for the portfolio criteria. In Fall 2017, the last time the paper-based system was used, student portfolios failed to meet the benchmark in six of the eight areas of portfolio criteria. This caused concern for members of the Portfolio Committee, prompting an investigation. To determine the root cause of the declining performance, student and faculty surveys were conducted. The committee also conducted an in-depth, second portfolio analysis of previously scored portfolios to validate the quality of submitted materials against the portfolio criteria.

In the student survey, students reported perceptions of the portfolio program as being of "little value" to their professional development and solely for the benefit of the nursing program, thereby impacting their motivation to engage in the process. There were complaints that the portfolio program was not communicated well to students until close to the required date of submission. Therefore, many students were not able to properly save assignments from previous courses and had to scramble to find them, resulting in haphazard submissions.

Faculty feedback revealed that the paper-based portfolio evaluation process, conducted at the school of nursing every semester by the faculty as a group, was time-constrained. Up to 55% of faculty indicated that the time commitment to attend the review was the least beneficial aspect of portfolio assessment. Faculty participation was depressed, leaving fewer reviewers with a higher workload. Further, the review sessions afforded faculty only 1 hour to review four to five portfolios, with each portfolio consisting of four assignments (some with more than

20 pages) and one cover letter. The reviews became rushed and lacked thoroughness. The number of faculty who rated the process as "very easy" also declined from 38% in 2016 to 15% in 2017.

There was also concern that the portfolio criteria lacked clarity among faculty and students. Students appeared unaware of the portfolio criteria when selecting assignments for their portfolio. This was evident in their cover letters, which did not adequately explain how the submitted assignments met the specific criteria. It was also determined that because the rubric criteria for scoring were vague and broad (e.g., "The student's portfolio evaluates quality improvement related to patient care"), differences in criteria interpretation among faculty were prevalent and contributed to scoring inconsistencies.

In the end, the committee concluded that there was a lack of buy-in and uniform understanding of the portfolio criteria among students and faculty. However, these challenges could be addressed through a well-planned transition to the eportfolio system.

Method

The following strategies were implemented to address the challenges identified. To determine the efficiency of the eportfolio system and the effectiveness of the strategies used, faculty and student surveys continued after each portfolio submission and review. Faculty participation and student achievement of portfolio benchmarks were also tracked for improvement.

Strategy 1: Collaboration With the IT Department

The portfolio committee sought collaboration with the university's IT department to design an eportfolio system within Blackboard™, the learning management platform of the university. Two goals were established for the system: (a) to create an uncomplicated, user-friendly process for students to create and submit their eportfolios; and (b) to enable faculty to review eportfolios online asynchronously, provide flexibility, and eliminate the time constraints of the paper-based review. To avoid complicating the system and the existing courses, it was decided early on that a stand-alone eportfolio course will be needed. Several system development meetings were held where the IT department presented the initial design according to the committee's conceptualization, redesigned the system as necessary, and presented it again to the committee until the system was ready for testing. Then, a prototype course was created to test how the system would handle submissions and faculty review. Once the system performed according to the committee's specifications, the official eportfolio course was created.

Strategy 2: Students as Stakeholders and Ambassadors

Student membership on the committee was expanded from two to eight students to emphasize that students were valued stakeholders and partners in the portfolio assessment program. Student members were heavily involved in revising the portfolio instructions for students, such as the creation of the step-by-step guides for compiling and submitting assignments and the portfolio template for formatting portfolios. Student members also served as ambassadors to the student body and visited

classrooms to explain to students the process, importance, and benefits of the portfolio program, professionally (e.g., student portfolios could be presented to prospective employers as proof of their development and achievements toward professional nursing) and programmatically (e.g., portfolio assessment improves and ensures a quality curriculum and program for the students). At the suggestion of the students, the committee also created an easily accessible portfolio resources tab on the school's internal website.

Strategy 3: Descriptors of the Assignments for Rubric

To achieve a more uniform understanding and application of the criteria in the portfolio rubric, the committee revisited the origins of the portfolio criteria such as the AACN baccalaureate *Essentials* (2008), QSEN competencies (2007), and program SLOs. Explicit, meaningful descriptors of the assignments expected of the students were then developed to define and specify the key elements of each criterion. This resulted in a revised and expanded rubric, incorporating the same descriptors, to increase the objectivity and consistency in scoring among faculty. For instance, the quality improvement criterion was revised to include the descriptor "Assignments that use data to monitor the outcomes of care processes and improvement methods in order to design and test changes and continuously improve the quality and safety of health care systems." The original informatics criterion (i.e., "The student's portfolio incorporates information management principles, techniques, and systems needed to provide nursing care") was expanded to include the descriptor "Assignments that require the use of patient care technologies and information management to communicate, manage knowledge, mitigate error, and support decision making." The descriptors were also included in the portfolio instruction sheet to inform students about the best assignments to include in their portfolio to demonstrate their achievement of the SLOs and meet the criteria.

Strategy 4: Faculty Orientation

A faculty eportfolio orientation was conducted before each portfolio assessment. The orientation included a discussion of the importance of the portfolio program in program assessment, evaluation, and curriculum design. The criteria in the expanded rubric were also reviewed, stressing the need for consistency among all faculty when scoring assignments. A step-by-step guide was also provided to demonstrate how to access and score the portfolios electronically, along with practice in reviewing and scoring a sample portfolio. Portfolio committee members were available to answer questions and guide faculty during the practice session. After orientation, faculty were allowed 2 weeks to review two to three portfolios. At the end of every portfolio assessment cycle, faculty and student surveys were conducted to evaluate the process and gather feedback for further improvement.

Results

After the transition, the faculty surveys indicated that responding faculty ($N = 20$ before eportfolio; $N = 18$ postimplementation) who strongly agreed on the value of portfolio in evaluating SLOs increased from 40% up to 55%. Half of the

faculty perceived the eportfolio online review process as very easy, compared with 15% for the paper-based review. Additionally, 88% of responding faculty reported that the expanded portfolio rubric was clear, and 100% also agreed that the instructions for scoring eportfolios online were clear. Comments about the electronic review of eportfolios were also overwhelmingly positive regarding its flexibility, convenience, and the amount of time required to complete a thorough review. Faculty participation in portfolio reviews also increased from 20 of 60 in the last paper-based review to more than 50% in Spring and Fall 2019.

Based on the student survey comments, some students still did not find the value of the portfolios to be beneficial to them. Nevertheless, student responses after the full implementation of strategies indicated that 83% of responding students understood the purpose of the portfolio program. Although there was poor participation in the initial survey, which limits conclusions that can be made, those who described the process as "easy" to "very easy" increased from 56% to 80% when queried about the ease of the submission process before ($N = 16$, response rate = 29.6%) and after the full implementation of strategies ($N = 36$, response rate = 69.2%). More students also responded to the latter survey than the initial survey, which may indicate increased buy-in.

The improvement in the benchmark scores of student portfolios was the most consequential effect of all the strategies used. After the introduction of eportfolio, benchmark deficits decreased from 6 of 8 criteria in Fall 2017 to 1 criterion in the Spring 2018. Student portfolios met all the benchmark criteria for the SLOs in Fall 2019. The full turnaround was lauded by the university as an exemplar of outcomes assessment during the university midcycle reporting of SLOs by the school in Fall 2018.

Discussion

Although some programs in health care education started to adopt eportfolios in the 2000s (Gray et al., 2019), others faced challenges in replacing the paper format with eportfolios (Collins & Crawley, 2016). This article presents useful strategies to assist nurse educators who may be transitioning to an eportfolio system. Surprisingly, the most challenging aspect of the transition to eportfolio was not the electronic transition. With assistance from the IT department, the transition was straightforward, aided by the dry runs in the prototype portfolio course, which eradicated problems before the actual deployment. The most challenging aspect was the buy-in from both students and faculty, which took two to three semesters to establish. The involvement of student members in smoothing out the submission process and the dissemination of information to the remainder of the student body was key to student buy-in (Ryan, 2018). The portfolio orientation, practice sessions, and the flexibility and convenience of the online portfolio review were instrumental in faculty buy-in. Therefore, engagement in the plan, informed benefits, familiarity with the protocols, ease of use, and time commitment may improve portfolio acceptability and outcomes (Garrett et al., 2013; Vachon et al., 2018).

However, the successful eportfolio transition cannot be attributed to the improvements of the portfolio assessment process alone. In response to the benchmark deficits, instructors

also created or modified course assignments, specifically geared toward addressing those deficits, closing the feedback loop, and making it clearer for students to identify assignments for their portfolios. Undeniably, the recognition of the portfolio program as an exemplar by the university, the curricular improvements made, and the drastic improvement in benchmark results also provided the momentum toward increased faculty participation and engagement.

Conclusion

A well-designed and well-articulated portfolio assessment program provides faculty with the opportunity to evaluate student outcomes, determine whether student competencies and learning outcomes are being achieved, and respond accordingly to improve curriculum more efficiently. Buy-in is also essential for a successful portfolio program. Student and faculty cooperation and participation is ensured when everybody understands the purpose, use, and benefits of the portfolio program to curriculum, program, faculty, and students.

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