Experiences in Teaching and Learning

Implementing and refining a Reflective Portfolio course sequence in a college of pharmacy

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Abstract

Background and purpose: In 2007, ACPE Standards and Guidelines were modified to include a requirement for standardized student portfolios with self-assessment of curricular outcomes and faculty assessment of student portfolio entries. The objective of this article is to describe the initial structure, components, and evolution of a Reflective Portfolio course sequence designed to meet this requirement.

Educational activity and setting: An e-portfolio process embedded within a Reflective Portfolio course sequence in which students provided self-assessment of curricular outcomes and faculty assessed student entries was developed and implemented. Following course implementation, a structured evaluation plan was developed and implemented to obtain feedback from students via surveys and focus groups. Eight student surveys were administered over three years.

Findings: Overall, feedback from the surveys identified that 47–87% of students indicated that some outcomes were more difficult to reflect on than others. Surveys also helped to identify the specific outcomes with which students struggled to find evidence and complete reflections. Student focus group feedback was categorized into the following six themes: course timing, lectures, workshops, evidence and portfolio entries, grading and advisors, and other.

Discussion: Based on the results of surveys and focus groups, the timing of lectures and workshops was modified, the curricular outcomes assigned to each year were changed and the number of outcomes assigned for reflection on an annual basis was decreased.

Summary: A quality improvement approach was utilized in the development and evolution of this Reflective Portfolio course sequence. This approach resulted in a four-year course sequence with e-portfolio student reflections evaluated by faculty advisors.

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Background and purpose

In 2007, the Accreditation Council for Pharmacy Education (ACPE) Standards and Guidelines were modified to include a requirement for student portfolios as a means to demonstrate and document that students have achieved the desired level of competence prior to graduation (Guidelines 15.1 and 15.4).[1] These two guidelines provide direction on assessment of student achievement and curricular effectiveness. Guideline 15.1 addresses the overall evaluation of student learning, including the use of student portfolios to help demonstrate students have achieved the school's curricular outcomes, while guideline 15.4 specifically addresses how portfolios should be utilized in the curriculum. In addition, the ACPE Guidance for Standards 2016 continue to support student portfolios as a useful tool in documenting student achievement of curricular outcomes.[2] Overall, both

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guidelines require that portfolios are standardized and include self-assessment of curricular outcomes and faculty assessment of student portfolio entries.

Colleges and schools of pharmacy have approached incorporation of student portfolios into their curricula in a variety of ways. A survey in the spring of 2008 identified that most colleges of pharmacy used portfolios, but with a wide variation in format, content, and assessment.[3] The majority of respondents (62%) indicated that portfolios were used exclusively in the experiential curriculum. The remaining 38% of respondents indicated that portfolios were utilized in both experiential and didactic and/or laboratory settings.[3] Less than half of colleges with a portfolio system utilized an e-portfolio platform.

Some pharmacy institutions that have incorporated portfolios into the curriculum focus on first- and second-professional year students.[4] Others focus on students in the experiential year only,[5] and some span the entire length of the professional program.[6,7] The setup and logistics of each program differ. Use of a paper-based[6] and electronic format[7] has been reported. Some programs allow students to include extracurricular activities as a way to document meeting curricular outcomes[6] whereas other programs pre-select the course assignment(s) required to fulfill a curricular outcome.[4]

Midwestern University Chicago College of Pharmacy (MWU-CCP) is a private, four-year Doctor of Pharmacy program located in the Midwest. The average class size is approximately 214 students. Following participation at the 2007 AACP Institute (*Evaluation, Assessment, and Outcomes: Responding to ACPE Standards 2007*), a MWU-CCP faculty team submitted a draft proposal to the Dean for the implementation of a longitudinal reflective student portfolio curricular component to address Guidelines 15.1 and 15.4. The draft proposal was submitted in June 2007 and a Reflective Portfolio *ad hoc* committee was subsequently created by the Dean, meeting for the first time in August 2007. The introduction of reflective student portfolios into the MWU-CCP curriculum was intended to promote student self-assessment and reflection, as well as document students' progression in the achievement of the MWU-CCP Curricular Outcomes (Table 1).

The committee spent three years designing all aspects of this innovation. The Reflective Portfolio course sequence (Reflective Portfolio I–IV), as originally designed, was introduced to students in their first professional year (PS1) in the Fall of 2010. The guiding principle for the portfolio process was self-assessment through reflection. The primary goal was for the reflections to serve as documentation of the students' journeys and progression through the curriculum. Figure 1 contains a timeline outlining the major steps involved in the creation and implementation of the program and the timing of quality improvement initiatives that were performed. This article describes the initial structure and components of this course sequence as well as its evolution.

Table 1
Midwestern University Chicago College of Pharmacy curricular outcomes at time of course implementation

I.	Practice patient-centered care
II.	Practice evidence-based clinical decision-making
III.	Promote public health and disease prevention
IV.	Participate effectively in interdisciplinary health care teams
V.	Communicate effectively
VI.	Demonstrate critical thinking and problem solving skills
VII.	Act in a professionally responsible manner and promote such action in others
VIII.	Develop and manage a pharmacy practice
IX.	Evaluate outcomes data associated with the practice of pharmacy
X.	Demonstrate self-assessment and self-directed learning

Educational activity and setting

Course development

The *ad hoc* committee included faculty representation from both departments in the college (Pharmacy Practice and Pharmaceutical Sciences). The committee was charged with developing a process for integrating portfolios into the curriculum and evaluating the process once implemented. Table 1 includes the 10 MWU-CCP Curricular Outcomes at the time the Reflective Portfolio course sequence was implemented in the Fall of 2010. These curricular outcomes served as the foundation for student self-reflections of progression in the curriculum.

A web-based platform was selected for the Reflective Portfolio program due to ease of access by students and faculty. Accessibility was essential since a number of our pharmacy practice faculty are based at a clinical practice site and spend the majority of their time away from campus. After careful review of several vendors, Taskstream® (New York, NY) was selected because its features were customizable. Designing the e-platform was a time consuming effort. However, once built, the electronic platform was easy to update and maintain. The e-portfolio is a secure platform that limits access to enrolled students and their assigned faculty advisors who can only view submissions from their assigned advisees. Although the vendor does allow students to publish their completed portfolios and share links via social media, this feature was not enforced within our curriculum. Finally, additional features that were valuable to the college included the ability for faculty to provide timely feedback to their advisees and run assessment reports on the different curricular outcomes.

Reflective Portfolio course sequence

The Reflective Portfolio course sequence is delivered and assessed as a stand-alone, four-course sequence (one