TEACHERS' TOPICS

Seminar Series Course to Teach Essential Knowledge and Skills Not Covered in the Traditional Pharmacy Curriculum

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Objective. To create a required seminar series that instructed students in both clinical and non-clinical subjects that were often difficult to incorporate into the traditional pharmacy curriculum.

Design. A required course was developed to introduce learners to basic professional skills, contemporary information, topics, and issues surrounding and influencing pharmacy practice. Students were also required to take part in a mock board examination, construct a letter of intent and curriculum vitae, and prepare a 10-minute micro-teach on a clinical topic.

Assessment. Students rated this course favorably and reported increased confidence with regards to several skill sets as well as in terms of licensing examinations.

Conclusion. Through this required course students gained a better understanding of the external issues influencing and mitigating the profession of pharmacy.

Keywords: seminar, curriculum

INTRODUCTION

In 2007 the American Council on Pharmaceutical Education (ACPE) released the latest version of accreditation standards for doctor of pharmacy degree (PharmD) programs (Standards 2007).¹ These standards prescribe various elements of pharmacy education including the biomedical sciences, pharmaceutical sciences, social/behavioral/administrative sciences, and the clinical sciences. The standards also address the development of core values, attitudes, and behaviors, including an ability to communicate effectively. Many curricular aspects of Standards 2007 are easily addressed by colleges and schools through inclusion within traditional basic science and/or clinical course work. Often certain aspects of pharmacy education that are considered important from both an accreditation and a faculty perspective do not easily fit into the traditional aspects of pharmacy curricula.²⁻⁵ The University of Kentucky College of Pharmacy underwent an internal curricular appraisal in 2006 that focused on linking professional outcomes to course content. A decision was made to design a seminar course to address various topical areas considered essential elements of the curricula but that did not easily fit with any existing courses. This new, required 1 credit-hour course was titled *Pharmacy Seminar*. It was envisioned that this course

might address missing clinical and nonclinical curricular elements that are difficult to classify into other more traditional courses.

DESIGN

The goal of the *Pharmacy Seminar* course was to introduce learners to basic professional skills, contemporary information, topics, and issues surrounding and influencing pharmacy practice. The course was designed on the premise that by becoming aware of the various issues presented, the learner would have the tools to be more engaged in influencing the profession and practice of pharmacy. The 1 credit-hour course was a required component of the professional program and was taught in the third year of the PharmD program. Specific course objectives are described in Table 1.

Specific topics for inclusion within the Seminar were initially identified by the College's curriculum committee, modified by the course instructor, and eventually approved by the practice department of the college. The course was designed to include 3 core elements: didactic lectures, a micro-teach experience, and a writing assignment. The didactic component addressed various topics ranging from licensing to veterinary practice (Table 2). Each didactic lecture was 50 minutes in length and delivered in a traditional format. Most lectures were delivered by the course instructor with various guest lecturers, including a veterinarian and the executive director of the Kentucky Board of Pharmacy.

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Table 1. Pharmacy Seminar Course Objectives

- Students will understand the healthcare landscape in terms of professional relationships with other medical professionals.
- Students will be able to discuss professional controversies or issues affecting the profession of pharmacy.
- Students will be able to deliver a concise and succinct teaching point presentation.
- Students will be able to concisely and constructively express complete thoughts using non-verbal communication.

One of the objectives of the course was to provide students an opportunity to engage in some level of peer teaching. This experience was meant to afford students the opportunity to practice their presentation skills, as well as to engage in an exercise that required them to design and research a “teaching pearl” (a helpful teaching tip or technique). Large class sizes precluded the ability to have every student in the course give a presentation. Thus, students were divided into 12 small groups of 10 to 12 students each and given the opportunity to select from a list of 16 teaching topics (Table 3). Students were also allowed to suggest their own topics with approval from the course instructor. Each group selected 1 pearl from the list on a first-come, first-serve basis. Students were told

Table 2. Didactic Lectures Included in a Pharmacy Seminar Course for Third-Year PharmD Students

Course Introduction
 Patient Presentations
 Effective Presentations
 Foundations of Pharmacy Education and Entry Level Doctor of Pharmacy Degree
 The Board of Pharmacy
 Licensure and Certification 101
 Pharmacy Technicians
 The National Association of Boards of Pharmacy Examination
 The Board of Pharmaceutical Specialties
 Postgraduate Training
 Residency, Fellowship, Graduate School
 Who's Who in the Health Care System
 Mid-level Practitioners
 Interviewing
 Curriculum Vitae
 Publication and Peer Review
 Posters and Abstracts
 Media and the RPh
 Veterinary Practice and Pharmacy
 Illicit Drug Use

Table 3. Suggested Topics for Pharmacy Students to Develop a Presentation in the Format of a “Teaching Pearl”

A New Approach to HTN – Renin Inhibitors Managing Spider Bites
 The HPV Vaccine - Controversy and Facts
 Are SSRIs Addictive?
 Peripheral Neuropathies - What Are They and How Are They Managed?
 Rhabdomyolysis – What Is It and How Do We Manage It?
 Rozerem - A Novel Agent for Insomnia
 Anaphylaxis vs. Anaphylactoid – What's the Difference?
 Doping
 Scabies – Identification and Management
 What Is and What Are the Risks of Avian Flu?
 Community Acquired MRSA
 Weight-loss/Obesity Drugs – What's New?
 Stem Cells and Medicine
 Animal Bites - Risks and Management
 Smoke Cessation – New and Old Agents

that the primary goal of the experience was “to teach the class about their topic.” The instruction was to last 10-12 minutes and emphasis was to be placed on teaching and presentation skills. Students were required to produce a 1-page handout that included at a minimum a title, 2 learning objectives, and all group member names. PowerPoint and other multimedia tools were prohibited so that students were forced to focus on the design and oral presentation of a succinct teaching point without using visual aids.

Presentations were made over the last 3 weeks of the course. Groups were assigned to a given week and 2 members of each group were randomly selected just prior to the presentation time. Immediately following a micro-teach presentation, the entire selected group was given an opportunity to add anything to the presentation. The assignment was assessed by the course instructor and the course teaching assistant by means of a teaching evaluation tool utilized by the School's residency program.⁶ All students were given a copy of the evaluation tool and each group was assigned a single grade. For the purposes of this pilot course, peer evaluation of teaching was not employed for logistical reasons. To prepare students for this experience, the second didactic lecture of the course was devoted to a discussion of aspects of effective oral presentations, including the provision of learning objectives, aspects of multimedia, and style.

The writing assignment consisted of a student-authored letter of intent accompanied by a current curriculum

vitae (CV). A didactic lecture was provided that reviewed basic elements of a well-formatted CV and letter of intent. Additionally, samples were provided to students for use as basic templates. This background lecture was provided early in the course. Students were instructed to work throughout the semester on this project and were allowed ample opportunities to have drafts of the assignment reviewed. An objective of this component of the course was to develop student writing and editing skills and to compel students to create and maintain an updated CV.

The last unique component of the course was a mock board examination. This aspect of the course was meant as a follow-up to didactic lectures that discussed processes surrounding pharmacy licensure. Students were instructed on the procedures for obtaining licensure in the United States. These discussions included information regarding reciprocity and score transfer as well as subtle licensing examination differences between US states. At the conclusion of the semester, students took part in a mock board examination, which consisted of a jurisprudence examination and a computerized board examination delivered online using the Blackboard platform. Each student received the same jurisprudence examination, while the mock board examination randomly assigned to each student 100 multiple-choice questions from a bank of 500. All students completed the jurisprudence examination at the same scheduled time, while the board examination was self-administered during a 3-day window.

Course grading was divided between a midterm examination (25% of the final grade) and final examination (45% of the final grade), which reviewed the didactic components of the course. The final examination grade also comprised scores from both the jurisprudence and the board examination (20% of final examination grade). The writing (10% of final grade) and teaching assignment scores (15% of final grade) were also used to calculate a final course grade. A small percentage of the final grade was based on class participation (5% of final grade). At the end of the course, students completed an evaluation that consisted of several statements and student responses based upon a 4-point Likert scale (strongly disagree = 1; disagree = 2; agree = 3; strongly agree = 4). Mean Likert scale scores were calculated for each response statement.

ASSESSMENT

The *Pharmacy Seminar* course was offered for the first time during the fall semester of the 2007 academic year and evaluated with the online CoursEval system utilized by the College of Pharmacy. The course enrollment consisted of 123 students. Eighty-nine students completed a course evaluation for a response rate of 72.4%. Students generally agreed with the response statement, "I

have become more competent in the course content and associated skills because of this course" (mean score: 3.6; SD $\pm$ 0.5). In terms of the overall value of the course, the mean rating was also 3.6 (SD $\pm$ 0.6), with a score of 1.0 being poor and 4.0 excellent. Students' responses to open-ended items were generally positive, with students reporting that they developed several skills as a direct result of the seminar (eg, CV writing, writing learning objectives). Students commented that the inability to use Powerpoint during the micro-teach experience was a challenge that helped them enhance their teaching skills by forcing them to employ a different style of presentation. Students also commented that they felt more prepared and confident with regard to licensing examinations.

DISCUSSION

This course employed several innovative and nontraditional approaches to instruction and assessment and proved to be popular with students. The course provided a template for the instruction of important topics that do not conveniently fit into other courses and could be easily adopted by other schools and colleges of pharmacy. As educators it is critical not to overlook less tangible but essential elements of instruction simply because they do not easily fit into the existing or required curricula. This seminar systematically addresses many of the teaching topics for which faculty members and curriculum committees often have difficulty in finding appropriate instructional homes.

Reinsmith used a similar concept to design and instruct a seminar course that focused on philosophy and values.⁷ Reinsmith acknowledged that "philosophy and values" were not easily instructed in any meaningful and intentional way in most existing schools and colleges of pharmacy. Similarly, seminar type courses and modules have been used in residency training to instruct a broad range of topics including pedagogy and management. Popovich et al designed and described a similar seminar that was specifically intended to maximize academic advising between faculty members and students.⁸ Our elective seminar involved 24 students and was 1 credit hour in length. Students reported that CV development was the seminar topic that they believed was most essential to their professional development. Secondly, students enjoyed the guest speakers, particularly those whose discussions related to residency training.

Design of a seminar such as the one presented here requires faculty time in terms of providing lectures and arranging for guest speakers as needed. Additionally, some of the more nontraditional course elements such as the micro-teach exercise and mock board examination require more extensive planning and organization.

Globally, a seminar course such as the one described here should link to the overarching goals of the college and be recognized as an area of importance and value by the appropriate curriculum committee. This pilot course will continue as a part of the required curriculum at our College. Future considerations include exploring mechanisms that would allow for more students to actively present as part of the micro-teach experience, incorporating peer evaluation of teaching into the micro-teach experience, and moving the jurisprudence examination to an online platform that delivers a random block of questions. Additionally, it would be beneficial to apply advanced statistical analysis (eg, Rasch analysis) to the evaluation data and assess changes in attitudes and behaviors as a result of the course.^{9,10}

CONCLUSION

Faculty members must acknowledge that the responsibilities to educate future pharmacists sometimes extend beyond the curricula prescribed solely by accreditation standards. Faculty members at our institution recognized this need and a formal course offering was designed. The course was an intentional attempt to incorporate various topical areas into the required pharmacy curriculum. Various methods of assessment including a mock board examination were employed and the offering received very positive evaluation from students. Similar seminars could

be easily designed and adapted at other schools and colleges of pharmacy.

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