STUDENT LEADERSHIP

A Leadership Elective Course Developed and Taught by Graduate Students

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Objective. To develop and implement a flexible-credit elective course to empower student pharmacists to develop lifelong leadership skills and provide teaching practice opportunities for graduate students.

Design. An elective course focusing on leadership development for second- and third-year doctor of pharmacy (PharmD) students was designed and taught by 4 graduate students under the mentorship of 2 faculty members. Student pharmacists could enroll in a 1-, 2-, or 3-credit-hour version of the course.

Assessment. Attainment of course objectives was measured using student pharmacist reflection papers and continuing professional development portfolios. Additionally, self-assessments of graduate students and faculty members delivering the course were conducted. In their responses on course evaluations, student pharmacists indicated they found the course a valuable learning experience. Graduate students found course development to be challenging but useful in developing faculty skills.

Conclusion. This flexible-credit elective course taught by graduate students was an innovative way to offer formal leadership instruction using limited college resources.

Keywords: leadership, graduate students, faculty development, pharmacy education, elective course

INTRODUCTION

In the ever-changing landscape of the healthcare field, pharmacists must develop innovative strategies and communication skills that will enable them to deliver high-quality and cost-effective care that will move the profession forward and improve patient outcomes. In order to do so, there is a critical need to provide pharmacists, especially student pharmacists, with tools and information needed to enable lifelong professional and leadership development. Leadership is an essential competency for pharmacy professionals that can be developed in all student pharmacists.¹ The Accreditation Council for Pharmacy Education, and the American Association of Colleges of Pharmacy (AACP) have called for enhanced training in

leadership skills and behaviors for student pharmacists.²⁻⁴ The Council for the Advancement of Standards in Higher Education suggests that leadership programs be created to “advance student competencies” in the foundations of leadership, personal development, interpersonal development, and development of groups, organizations, and systems.⁵ Colleges and schools of pharmacy are capable of developing a cadre of leaders prepared to communicate, collaborate, and collectively address the needs of their profession, their practices, and ultimately their patients.

Leadership development can be provided by colleges and schools of pharmacy using a variety of approaches.⁶ For example, the University of Minnesota has successfully developed a sequence of elective coursework and sets of required activities to develop leadership of student pharmacists.⁷⁻⁹ Another promising approach to leadership development is to focus on *authentic* leadership. Knowledge of one’s self, an ability to have self-expression of beliefs and convictions, and alignment of concordant goals with those beliefs are hallmarks of authentic leaders.¹⁰ Authentic leadership development is important for all students because it focuses on self-awareness that can be developed regardless of positional status or authority, and

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emphasizes the ability to monitor and self-regulate behaviors and emotional reactions.¹¹ These abilities enable leaders to adjust their communication and overall style as they learn more about themselves and groups with whom they interact. Thus, authentic leaders are able to evaluate and use more effective strategies when approaching complex situations. By reflecting on their own and by careful observation of others' life streams, student pharmacists can develop their authentic leadership and better serve as leaders in their practice sites, the profession of pharmacy, and their communities.¹²

Student interests and needs necessitate institutions of higher education provide course offerings to accommodate individual learning preferences. Learner orientation towards educational goals are related to a person's self-efficacy and developmental readiness.^{13,14} People tend to have either a *performance* or *learning* orientation toward educational goals. While many pharmacy education tasks are viewed as opportunities to perform, demonstrate knowledge, and receive feedback, providing students more opportunities to engage in learning-oriented tasks through action and self-directed reflection may be conducive to leadership development.¹⁵ Institutions of higher education and secondary education in the United States and abroad have begun offering flexible credit programs allowing students to customize experiences in educational programs through the mixing and matching of experiences that have been assigned credit value.^{16,17} The use of a flexible-credit structure can enable student pharmacists to select a level of engagement and commitment to a course that suits their own leadership development needs. This is an especially important consideration as many leadership studies have emphasized the importance of the role that students play in their own leadership development.¹⁸ Using reflective contemplation to drive their own learning enables students to develop lifelong leadership development skills from chosen opportunities and life experiences by placing greater responsibility on the individual to be an active and experiential learner.¹⁵ Thus, student pharmacists who are able to independently seek and select challenging experiences not only facilitate their own development but will also be more capable of ongoing leadership development.¹⁹

Finally, preparation of graduate students for academic careers is essential to sustaining the academy. All post-PharmD training backgrounds, including residency and graduate education, can prepare graduates for academic pharmacy positions.²⁰ However, little information is available describing specific efforts used by these programs in pharmacy. A process for formalizing graduate student preparation for faculty responsibilities in colleges and schools of pharmacy has been proposed.²¹ One college has developed a simulation experience where graduate students develop

curricular change and are exposed to foundational knowledge necessary to develop and evaluate such changes.²² Residency programs are also incorporating teaching experiences to prepare clinical pharmacy faculty members.^{23,24} More descriptions of faculty preparation of graduate students are warranted in all areas of academic pharmacy. This manuscript describes the format and outcomes of a flexible-credit leadership elective designed to empower student pharmacists to develop lifelong leadership skills and provide graduate students with teaching practice opportunities.

DESIGN

A flexible-credit leadership development elective course was created and delivered in the spring of 2011 by 4 graduate students with the assistance of 2 pharmacy faculty members. Development of the leadership elective was led by 2 graduate students completing practicum requirements for a teaching certificate offered by the Graduate College at the University of Iowa.²⁵ Two additional graduate students were recruited to assist in development and delivery of course materials based on their teaching interests and availability. All 4 graduate student instructors had served in leadership roles in various professional and student organizations, had pertinent backgrounds in pharmacy (ie, 3 held PharmD degrees and 1 had a bachelor's degree in pharmaceutical sciences and a master of business administration) and were senior-level doctoral students majoring in pharmaceutical socioeconomics (ie, social economic, and administrative sciences) in the college of pharmacy.

Course planning discussions began 1 year prior to launch, and implementation was discussed with the course coordinator and a clinical faculty member in the Department of Pharmacy Practice and Science. The elective course was approved in the summer of 2010. No direct funding was provided for the course except for the college's informational technology support, and the graduate student instructors were responsible for course implementation. Thirty student pharmacists enrolled in the 1-credit-hour option, 5 enrolled in the 2-credit-hour option, and 2 enrolled in the 3-credit-hour option. The elective leadership course used a wide variety of texts and scholarly publications to provide student pharmacists with a range of materials discussing leadership topics (list available upon request). All research activities were granted exempt status and approved by the University of Iowa Institutional Review Board.

The University of Iowa College of Pharmacy has a long tradition of nurturing aspiring leaders in the profession through active collaboration with the Iowa Pharmacy Association (IPA) and through various coursework and experiences including a required pharmacy

management course, introductory pharmacy practice experiences (IPPEs), advanced pharmacy practice experiences (APPEs), an annual student pharmacist leadership conference, and opportunities with various student pharmacist organizations.²⁶

The leadership elective course was developed to further integrate leadership development into Iowa's professional pharmacy curriculum. The course used a leadership speaker series (1-credit hour), facilitated discussion of leadership topics and assignments (2-credit hours), as well as an experiential/service project (3-credit hours) to introduce and increase student pharmacist exposure to leadership topics. The course was offered to students in their second and third years (first-year students were excluded because of a scheduling conflict). Students not enrolled in the course also could attend the Leadership Speakers Series for IPPE credit.

The Leadership Speaker Series was conducted in an interview format in a large lecture auditorium. All interviews were recorded by one of the graduate student instructors using a laptop, a Web camera, and a microphone. These recordings were made available online using Panopto software (Panopto, Pittsburgh PA) for students with excused absences and to allow students who attended the interview to review the video in preparing their reflections. The facilitated discussion section was conducted in a smaller classroom. The experiential/service-learning project was conducted outside of the classroom, with guidance and support provided by graduate student course instructors.

Graduate instructors mapped learning objectives with cognitive processes from the revised Bloom's taxonomy to describe the level of learning expected for students (Table 1).²⁷ Students were assessed at the end of the course to determine their satisfaction with course delivery and content.

This course also served as a teaching practicum and professional preparation for graduate students; thus, additional outcomes were expected. Graduate students created this leadership course, demonstrating the ultimate cognitive process of learning. They were to gain experiences with course development, implementation, and evaluation similar to experiences by faculty members within colleges and schools of pharmacy. Their satisfaction with the program, lessons learned in teaching, and suggestions for future changes to the elective course were also solicited at the end of the semester.

The graduate-student instructors developed all course content and lesson plans in a series of meetings and independent work during the summer and fall semester prior to launching the elective leadership course. They adopted a "learner-focused" philosophy and designed the course based on 4 overarching tenets:

- (1) To create opportunities for student pharmacists to observe good leadership role models both within and outside of the pharmacy profession.
- (2) To encourage and foster lifelong self-reflection on learning and increase self-awareness among student pharmacists.

Table 1. Mapping of Course Objectives by Credit Hours With Revised Bloom's Taxonomy Cognitive Processes

1 Credit Hour	2 Credit Hours (All objectives for the 1-credit-hour course plus the following)	3 Credit Hours (All objectives for the 1- and 2-credit-hour courses plus the following)
Define leadership and explain how it relates to their leadership self-concept (Remember)	Define advocacy and explain the importance of advocacy in the history of the pharmacy profession (Understand)	Design and complete a leadership project for benefit of the college, profession, or community (Create)
Identify leaders inside and outside the profession of pharmacy (Understand)	Create a strategy for developing mentoring relationships (Apply)	
Use self-reflection and describe its importance to leadership development (Analyze)	Use networking opportunities to connect with leaders inside and outside the profession of pharmacy (Apply)	
	Compare and contrast styles of leadership (Understand)	
	Communicate orally and in written form as a leader (Apply)	
	Create a leadership portfolio to use for continuing professional development of leadership skills and showcasing leadership artifacts (Create)	

Notes: Cognitive processes appear in parenthesis.²⁷

- (3) To expose student pharmacists to leadership theories and scholarship important to the profession of pharmacy.
- (4) To create opportunities for student pharmacists to participate in meaningful leadership and professional development processes.

These tenets closely mirror those of Kneflekamp and Widick's seminal developmental instruction model, which describes 4 important elements for delivering educational experiences that meet the needs of student learners: structure/framework, diversity, experiential learning, and personalism.²⁸ Structure/framework was directly related to the amount of direction and support to be provided to student pharmacists enrolled in the course. The flexible-credit course structure gave students options for enrolling and committing to 1-, 2-, or 3-credit hours in the leadership elective. Each incremental credit-hour commitment was associated with additional direction and support to be provided by the course instructors as the complexity or depth of the exposure to leadership development increased.

The second element of the course design was that of diversity, which is related to creating a learning environment that incorporates and encourages a presentation of a variety of perspectives of leadership to student pharmacists. This was reflected in the course through the leadership speaker series and facilitated discussion used in the 1-credit-hour and 2- or 3-credit-hour course options, respectively. The

course schedule and leadership-related topics illustrating this element are provided in Table 2. The leadership speaker series consisted of 1-hour interviews of individuals regarded as leaders inside and outside of the profession of pharmacy. The interview style was modeled after the television program "Inside the Actors Studio," which is characterized by in-depth questions about the individual's lived experiences.²⁹ On a rotational basis, a graduate student instructor led an interview with an invited leader and sought to elicit each speaker's personal and observed experiences and perspectives as a leader, in addition to the circumstances and situations that have impacted their own leadership development throughout their lives and careers. During the first week of class, one of the graduate student instructors presented expectations of the course and led a discussion on the meaning and importance of leadership.

All student pharmacists enrolled in the course were asked to provide 2 questions or comments on index cards based on the speaker. Students also were given the opportunity following the interview to ask their own questions. Students enrolled in the 2- and 3-credit-hour leadership course options, facilitated discussion was used to increase student comfort and familiarity with the process of leadership development and, in general, the concept of leadership beyond the brief exposure to leadership provided by the leadership speaker series. The element of diversity refers not only to the breadth of perspectives being presented, but also to the quantity and complexity of the leadership-related content presented.³⁰ This was reflected

Table 2. Course Schedule, Activities, and Assignments^a

Leadership Speaker Series (all students)		Facilitated Discussion (2- and 3-credit-hour course)		Service Project (only 3-credit-hour course)
	Assignments		Assignments	
1	Course Introduction	Leadership		
2	Pharmacy Association CEO	Mission-driven Leadership	Personal Mission Statement	
3	Student Pharmacist Leaders	Four-frame Leadership	Four-frame Reflection	
4	Service Learning Champion	Advocacy and Leadership	Advocacy Reflection	
5	Community Pharmacy Owner	Networking	Networking Plan	
6	Pharmacy Association CEO	Mentoring	Mentoring Plan	
7	Provost	Reflection #1 ^b	CPD Cycle #1 ^b	
8	Fortune 500 CEO		MLQ-5 Survey & Reflection	
9	Credit Union CEO	Pharmacy History	Historical Presentations	
10	Chamber of Commerce CEO	Pharmacy History	Historical Presentations	
11	Hospital COO	Servant Leadership	Shackleton Reading	
12	High School Teacher/Coach	Global Opportunities	Global Reflection	
13	Dean	White-coat Leadership	CPD Cycle #2	
14	Clinical Pharmacist	Course Wrap-up	Leadership Portfolio ^b	Presentation ^b

Abbreviations: MLQ - Multifactor Leadership Questionnaire. CPD - Continuing Professional Development. Wk - Week. Cr - Credit hour(s).

^a Students taking 2 credit hours are also required to complete requirements for 1 credit hour. Students taking 3 credit hours are also required to complete requirements for 1 and 2 credit hours.

^b Graded assignment.

in the 2- and 3-credit-hour course option by introducing and discussing a variety of leadership-related topics such as: mission-driven leadership, 4-frame leadership, advocacy, networking, mentorship, entrepreneurial leadership, transformational leadership, pharmacy history/recipients of pharmacy's highest honors, servant leadership, white-coat leadership, and communication strategies.

The third element of the course design used was experiential learning, which refers to the activities that enable students to connect their leadership learning with their own lives and needs as pharmacy professional students. This was demonstrated in the use of leadership speaker series reflections and the assembly of leadership portfolios, as well as a variety of other activities. All student pharmacists enrolled in the leadership elective, regardless of credit hour selection, completed leadership speaker series reflections at both the midpoint and end of the course. For these papers, students were asked to reflect upon material presented during the speaker series in order to encourage the extrapolation of meaningful messages or lessons and to try to connect these with their own lives and future pharmacy careers. Student pharmacists were provided with 2 prompts: (1) explore differences and similarities across any set of guest speakers, and (2) explain lessons learned from non-pharmacy speakers(s) and how you could apply these to pharmacy problems. Students were allowed to choose the prompt used for each paper written with the understanding that both prompts must be addressed during the course of the semester. Student pharmacists' responses to these 2 prompts demonstrated reflective learning through what Hatton and Smith refer to as *dialogic* and *critical* reflections.³¹ In responding to prompt 1, student pharmacists provided a *dialogic* reflection by not simply describing the events or experiences during the leadership speaker series reflection, but rather exploring, analyzing, and synthesizing the various leadership perspectives to which they were exposed. In responding to prompt 2, student pharmacists engaged in *critical* reflection, wherein they moved beyond analysis and synthesis to consider the varying leadership experiences and perspectives presented in the speaker series in light of broader social and professional contexts within the pharmacy profession.

Students enrolled in the 2- and 3-credit-hour options also were required to develop a leadership portfolio. Each student leadership portfolio consisted of selected context-rich assignments including a personal mission statement and philosophy of leadership, reflections on leadership topics discussed during the facilitated discussion and the leadership speaker series reflections, a curriculum vitae, and 2 continuing professional development (CPD) cycles.³² The compilation of the leadership portfolio pro-

vided students with direct, practical, and meaningful opportunities to connect their learning in the leadership course with their own lives and visions of their professional futures through purposeful actions and experiences. Those student pharmacists enrolled in the 3-credit-hour option also included a summary and description of the required experiential/service project.

The final element incorporated in the course design was that of *personalism*, that is, the experiences and activities should accommodate the individual's different levels of need for safety and recognition, while also encouraging appropriate levels of exploration and risk. This element was reflected in both the flexible-credit course structure and the variety of tasks that student pharmacists were asked to complete, depending on their 1-, 2-, or 3-credit-hour level of commitment. While all student pharmacists enrolled in the course were asked to provide 2 questions or comments on index cards to be given to the leaders interviewed during the speaker series, those student pharmacists who were comfortable doing so could also verbalize their questions or comments during the interview session.

Tasking student pharmacists enrolled in the 2- and 3-credit-hour option with the completion of the CPD assignment provided student pharmacists with a self-directed, systematic, and outcomes-focused approach to leadership learning and growth.³² The CPD tool sought to enhance the knowledge, skills, attitudes, and values required for leadership growth by having student pharmacists fully engage in and document their leadership learning by identifying leadership opportunities and developmental needs, as well as developing and implementing a personal leadership development plan that could then be evaluated to assess whether their personal leadership learning needs were met, how they envisioned their leadership changing as a result, and whether any new leadership learning or development needs were identified for future growth. Each student personally identified various leadership growth opportunities that were then targeted during each of the 2 CPD cycles that were to be completed over the course of the semester by developing a plan and using SMART goal-setting methods to achieve intended leadership learning outcomes. Individualized qualitative feedback was provided to students after completion of reflections, other assignments, and CPD cycles. Thus, each student was provided with a leadership learning environment that encouraged a self-directed yet systematic way for students to take appropriate risks that could further their leadership development and learning experience.

EVALUATION AND ASSESSMENT

A thematic analysis of course-required reflection papers (n=74) was conducted.³³ Papers were evaluated on

the development of a theme, preparation of action statements, clarity, and grammar. The thematic analysis was guided by the required elements and completed using a process of open, descriptive coding. Common topics addressed in students' papers included service, mentorship, work-life balance, relationship building, different leadership styles, and organizational culture. Several themes emerged from the analysis and those themes along with representative quotes are provided in Table 3. Students demonstrated their ability to recognize speakers' leadership styles based on their life stories. Additionally, reflections provided evidence that students internalized and articulated their authentic leadership voices, demonstrated through creation of action statements that espoused self-awareness and conveyed a more developed sense of self-concept. The pinnacle of reflection was by students

who became eager to engage in new leadership objectives that related to their own life streams. Grades ranged from "C" to "A" on reflection assignments completed during both halves of the semester. While no significant increases were identified across learners from reflection assignment 1 to 2, all students making less than an A on reflection 1 used the feedback provided to make an A on reflection 2.

An analysis of leadership portfolios, prepared by students enrolled in the 2- and 3-credit-hour commitment was previously described.³² In preparing their self-directed learning experiences, students selected topics of focus such as pharmacy advocacy, mentoring, and work-life balance. In their portfolios, students were able to demonstrate success in developing a systematic approach to becoming life-long learners when focused on developing leadership skills. Students in the 3-credit-hour option created an elec-

Table 3. Thematic Analysis of Student Reflection Papers

Themes	Representative Quotes
Students appreciated and enjoyed the leadership speaker series, especially the diversity of invited speakers in terms of industry, gender, career path, tenure, and leadership styles.	<i>It was truly an extraordinary experience seeing the wide range of leaders in all of their respective fields. Every single one of them came from different backgrounds and different leadership styles. They all knew exactly what their background was and the key turning points in their career that got them to where they were at. They all spoke with enthusiasm and love for their work that could withstand any argument otherwise. (Reflection #63)</i>
Students were able to gain new perspectives and reexamine their roles outside of school and work as citizens of their communities by listening to non-pharmacy speakers.	<i>One of the reasons I really enjoyed [him] was because his experiences reflected on a different aspect of leadership than many of the other speakers we have listened to. He has a very comprehensive list of organizations that he is involved with and they are much different than the ongoing list of memberships and positions we see on the resumes of pharmacists. (Reflection #9)</i>
Throughout reflections, students were able to identify similarities and differences between the speakers' leadership styles.	<i>They also see themselves as different types of leaders. [One] is a servant leader and [the other], a natural manager. These differences as well as others make them unique and well suited for their respective roles. Yet, there are similarities in their leadership philosophies that demonstrate the importance of self-reflection and self-sacrifice to successful leadership. (Reflection #58)</i>
Listening to speakers facing similar difficulties was a relief to students and they were able to take home lessons pertinent to their situations.	<i>I liked [his] definition of "balance". He says that he goes in and out of being on top of things, which I can absolutely relate to. I thought I was just not successful at "balancing", but he says that is normal, which was comforting to hear. (Reflection #24)</i>
Students made keen observations of how the speakers presented themselves and how they would like to follow the speakers' examples.	<i>Starting with [his] use of non-verbal communication, he captivated the audience with his strong, but compassionate tone. He also had a welcoming lean in his body position which spawned a feeling of trust and respect and made me really believe in his experiences. . . I hope to hone these skills, as naturally as [he] displayed them, to facilitate an open and trusting setting, before ever saying anything really profound. (Reflection #31)</i>
Many students were motivated by the speakers to take actions and to make changes upon reflecting on the lessons mentioned during the interviews.	<i>He told every one of us to take the opportunity someday to hire a special needs individual. . . Ever since [his] visit, every time I am at the store and there is a special needs person working, they are always the first to say hello and offer their help. . . These people are some of the most friendly and caring individuals I have ever met and I cannot believe it took [him] for me to notice that and make a change because of it. (Reflection #38)</i>

Table 4. End-of-Course Evaluations of Students Enrolled in Leadership Development Elective (N=29)^a

Item	Mean (SD)
Course requirements are clear.	5.4 (0.6)
Course goals are clear to me.	5.5 (0.6)
This course is intellectually stimulating.	5.3 (0.7)
I am encouraged to learn on my own.	5.4 (0.6)
This course emphasizes problem solving.	5.0 (1.1)
The frequency of student evaluations for this course is appropriate.	5.6 (0.6)
Ideas rather than facts are emphasized in this course.	5.6 (0.5)
A good mix of lecture and discussion occurs in this class.	5.5 (0.6)
Practical applications of course material are discussed.	5.4 (0.8)
Grades are based on fair weighting of the required course activities.	5.6 (0.5)

N varied from 26 - 29 because of nonresponse to some items.

Items were rated using a 6-point scale ranging from 1 = strongly disagree to 6 = strongly agree.

tronic leadership resource containing career profiles of pharmacists, student leadership profiles, curriculum vitae and resume preparation, and residency advice.³⁴ In their reflection, the students expressed satisfaction in completing a project of this magnitude that will hopefully impact student pharmacists at the university for many years. All portfolio submissions were deemed satisfactory for an “A” level of achievement within the course.

Student attainment of course objectives was measured using end-of-course evaluations and grades from student assignments. Quantitative data from end-of-course evaluations are descriptively reported in Table 4. Overall, the students rated the course extremely well in the end-of-course assessment. Additionally, students provided some qualitative feedback. Qualitative feedback was provided by 6 of the 7 students enrolled in more than 1-credit-hour. Responses were positive on small discussions and enjoyment of the class. However, there was some disagreement on the leadership speaker series. While some students expressed “enjoyment in the variety of speakers,” other students were disappointed that only 2 of the speakers were female.

To describe teaching experiences and suggestions for improvement in offering the leadership elective course, self-reflections of graduate students and faculty members were conducted. The 6 instructors involved with the course either completed a written (n=5) or verbal (n=1) reflection based on an open-ended guide (Appendix 1). The interview was recorded and transcribed verbatim. The goal of the reflective questions was to obtain instructor experiences and evaluations associated with the

course. These reflections were analyzed so the unique perspectives of the instructors could provide context to their experience in developing and delivering the course. Transcripts and written reflections were coded using the techniques of grounded theory.³⁵ The unit of analysis was the individual quotes from the participants, divided at the level of discrete ideas. Codes were sorted and themes were discussed among the authors. Representative quotes were selected to ground the themes in the data.

Reflective statements of course instructors primarily fit into 3 main focal areas: graduate student experiences as instructors, delivery of flexible-credit course, and the speaker series (Table 5). Graduate instructors recognized this demanding opportunity provided significant opportunity for development as teachers. However, they faced significant challenges as tangible assistance from administration and faculty members was occasionally lacking. Instructors commented that the course was time intensive to coordinate and was destined to fail without a full cadre of administrative resources and dedicated faculty support.

The delivery of the flexible-credit elective was deemed effective by instructors, but unique insights on student participation, course content, and student performance were identified. The 1-credit-hour option was well attended, but only a handful of motivated student pharmacists signed up for the 2- and 3-credit-hour offerings. In hindsight, graduate student instructors felt delivery of the material for the students enrolled in the 2- and 3-credit-hour course should have been streamlined and had a more focused objective and tangible output. The students enrolled in the 3-credit-hour course were to complete a separate leadership related project. There were only 2 students who pursued this option and further refinement of the course appeared necessary to the instructors. In addition to the speaker series, the course also used a CPD tool for leadership development. The instructors found this promising, but further development and experimentation will be needed. All students also were required to submit 2 reflections. Instructors judged the quality of student reflections as mixed, but saw improvement over the semester. Overall, instructors believed the course was beneficial to students.

Finally, the instructors believed that the speaker series was key to students’ authentic leadership development. The non-pharmacy speakers stood out based on their unique leadership perspectives and stories. Instructors reflected that students using note cards to submit speaker questions was a good way to encourage participation. As mentioned previously, the speaker series was a challenge to coordinate. Having a speaker every week may have been too taxing for the instructors and students. However, on occasions when the college administration was fully involved in speaker

Table 5. Thematic Analysis of Instructor Interviews

Focal Areas	Themes	Representative Quotes
Graduate student experiences as course instructors	Graduate students were enthusiastic about the learning and development opportunity that came with creating and teaching a course.	[The benefits were] <i>expanded personal networks, increased confidence in teaching grading, and leading discussions, expanded knowledge of leadership topics, added experience in developing learning objectives, delivering course materials, evaluating student performance, and eliciting student feedback.</i> (Graduate Instructor #1)
	Graduate students faced significant challenges when assistance from administration were lacking, but were fully successful when administrative support was present.	<i>A major challenge was role expectations facing graduate students. I think college administrators took on a lot of challenges on our behalf in starting this course. But, there were many times along the way where we needed doors opened that normal faculty could open themselves.</i> (Graduate Instructor #3)
	Faculty members recognized the time and resources associated with course delivery is unsustainable without a full-time presence.	<i>... I think the course is a great idea. And I'd like to see it sustained. But in order to do so you have to have at least one person of consistency...</i> (Faculty Instructor #1)
Delivery of flexible-credit course	Students who signed up for the 2 or 3 credit-hour flexible-credit options were aware of expectations and well-motivated.	<i>The course was elective and students were aware of time commitments up front vis-à-vis the flexible-credit enrollment structure, so they came motivated and prepared for the tasks they faced.</i> (Graduate Instructor #3)
	Students might benefit from a more focused 2 or 3 flexible-credit options with more tangible student outputs.	<i>I would simplify the leadership elective course. Personally, making it focus on one thing like developing that leadership philosophy would probably be good enough. I could envision offering a one, two, three hour course in doing just that.</i> (Graduate Instructor #3)
	Further refinement was necessary for CPD and service learning elements of the course.	<i>The third hour service learning project seemed to be worth the credit given, but the design of this third hour credit might benefit from having more specific learning objectives in a structured process of developing a service learning experience.</i> (Graduate Instructor #1)
Speaker series	Non-pharmacy leaders' unique perspectives and insights were featured prominently in students' writings.	<i>I think the variety of speakers, especially the non-pharmacist speakers, really brought some new perspectives to leadership. Too often pharmacists only are exposed to other pharmacists. The comment cards from students suggested they really appreciated the non-pharmacist leaders and I hope the students continue to have this outlook.</i> (Graduate Instructor #2)

Notes: Instructor utterances appear in italics.

coordination, the benefits clearly were observable through decreased stress among the graduate student instructors.

DISCUSSION

This project made 3 important contributions to the pharmacy education literature: (1) it described the design for developing leadership competencies in student phar-

macists; (2) it demonstrated the successful use of graduate students experientially learning how to develop and launch a new course; and (3) it proposed novel flexible-credit course structures as a means for providing preferential learning opportunities to higher education students.

The goals of this leadership development elective course were to empower student pharmacists to develop

lifelong leadership skills and to provide graduate students with the opportunity to prepare for future academic pharmacy careers. A critical component to empowering student pharmacists to develop lifelong leadership skills was the emphasis this course placed on developing authentic leadership skills and the habit of reflective practice. Reflection activities were linked to the learning objectives throughout the leadership course to optimize learning from the experience of participating in the course regardless of the credit-hour option available to student pharmacists. As Moon suggests, in order to transform experience into transformative learning, student pharmacists should be encouraged to consider their leadership learning experiences within the context of their existing knowledge, theories, beliefs, convictions, and questions.³⁶ Empowering student pharmacists to examine these assumptions in relation to their personal and professional goals and subsequently enabling a restructuring of their ideas and of their abilities through the process of learning about leadership, serves as a powerful method for developing authentic leaders ready and capable of serving their practice sites, the profession of pharmacy, and their communities. Integrating and promoting reflective practice as a necessary part of leadership development throughout the course not only provided student pharmacists with an opportunity to synthesize information and their connected experiences, but it also allowed the graduate student instructors to evaluate the leadership learning of student pharmacists in the course.

Overall, student pharmacists found the course to be a positive learning experience with the amount of effort expended closely matching their expectations. Student pharmacists were exposed to a variety of leadership styles and life stories during the Leadership Speaker Series and demonstrated the ability to differentiate among the convergent and divergent leadership styles elicited during the interviews with leaders inside and outside of the pharmacy profession. An evaluation of the Leadership Speaker Series reflections by student pharmacists demonstrated an internalization of the leadership-related material discussed by the invited leaders during the speaker series. Student pharmacists were especially attracted to observing and interacting with leaders from outside the pharmacy profession as it provided an opportunity to expand the breadth of their exposure to the unique perspectives of these leaders. Student pharmacists who committed to the 2- or 3-credit-hour options were able to successfully demonstrate a systematic approach to becoming lifelong learners, especially when focusing on leadership development. The culmination of this leadership development experience for many student pharmacists revealed a renewed eagerness and desire

to engage in new leadership experiences and further their growth as they began envisioning their respective future personal and professional paths with a more developed sense of self as practitioners and leaders in the profession of pharmacy.

The unique flexible-credit enrollment options allowed interested and exceptionally motivated student pharmacists to choose a higher level of commitment to their leadership development by enrolling in more credit hours that would deepen their exposure to leadership topics, increase levels of expectations for engagement, and provide greater levels of support and guidance that would accompany them throughout their leadership learning experience. Feedback from student pharmacists revealed this increased level of personalism was appreciated, especially within the small-group environment of the facilitated discussions section of the course. This supports the AACP Argus Commission report calling for leadership development instruction that fits students' needs at all levels of involvement to reach the broadest audience possible.¹

Beyond the 1-credit-hour course option, the 2- and 3-credit-hour options of the course incorporated a variety of materials including books, videos, and articles to introduce a range of important leadership topics such as various leadership styles and behaviors, and the importance of advocacy, mentorship, networking, and communication strategies. However, some instructors felt the course may have been somewhat content heavy. Although the course design sought to provide a diverse exposure to leadership and leadership development, focusing on a narrower set of learning-related activities and content is recommended in future courses. Anecdotally, student pharmacists desired more practical and application-driven discussions of leadership as opposed to theory. Striking an optimal balance between introduction and discussion of leadership theory and practical application-driven activities is a delicate process, especially in pharmacy education. A reasonable way to narrow the focus of some of the material in the course may be to lessen the amount of leadership theory that is included.

Regarding the development and implementation of the course, graduate student instructors found developing the elective leadership development course to be time consuming and challenging but also useful for developing skills essential for success in careers in academic pharmacy. The demands of the professoriate are diverse across institutions and are especially difficult for junior faculty members trying to establish themselves. Developing skills while in postgraduate training can provide skills necessary for junior faculty members to succeed upon being hired. While much can be accomplished by institu-

tions in both graduate student preparation for faculty roles and in orientating and mentoring junior faculty members, AACP should continue its efforts in providing stewardship in faculty preparation. Association work supporting faculty mentoring, faculty orientation, new faculty funding, and postgraduate faculty recruitment and preparation is of profound importance to sustaining academic pharmacy and the profession.

A major challenge in implementing this course in a sustainable manner was the significant use of graduate students. This course presented a unique synergy in which graduate students were able to complete teaching practicums and student pharmacists were able to complete a leadership elective. However, mechanisms would need to be put into place to sustain both efforts. While graduate students' enthusiasm and abilities in teaching this course were evident, it is not feasible to continue the leadership course in the long-term without a dedicated faculty member outside of the college's administrative office overseeing the course. Additionally, faculty mentorship is required for any student wishing to complete a teaching practicum. Other colleges and schools of pharmacy have instituted teaching training predominately operated by faculty members. More demonstration projects of training graduate student in teaching methods are warranted. The course has since been revised to a 2-hour elective course entitled Advocacy in Leadership. Future iterations of this elective course may change depending on associated personnel and their interests.

SUMMARY

This flexible-credit elective course using graduate students as instructors was an innovative way to offer formal leadership training using a limited amount of college resources. Student pharmacists found the course a positive experience overall with the amount of effort expended close to expectations. Graduate students found course development challenging but useful in developing skills necessary for service as future faculty members. If the pharmacy profession it to assume a greater role in patient-centered delivery of care and improving medication use and safety, colleges and schools of pharmacy must embrace leadership development as a critical component of pharmacy education.

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Appendix 1. Interview Guide for Course Instructors' Self-Reflections

What were your overall experiences in offering the leadership elective in Spring 2011?

The course goal was to empower student pharmacists to develop lifelong leadership skills and to provide graduate students teaching practicums. How effective was the course in reaching the course goals? How do you know?

What were the challenges and barriers as well as facilitators in offering this leadership elective?

What were personal benefits in offering this leadership elective?

What seemed to work well in offering this course that you have used/will use again in teaching?

What changes to the leadership elective course would you suggest going forward?