BRIEF
An Advanced Pharmacy Practice Experience in Leadership Development
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Objective. To describe the development and implementation of an advanced pharmacy practice experience (APPE) in leadership.
Methods. A leadership APPE was created and continuously improved over five years from being mostly content-oriented to being more of an experiential offering by identifying and implementing rich, practical leadership experiences. Activities included PhotoVoice, Power of Full Engagement, What’s Your Passion?, Transformational Leadership, Speech Acts, a Mindfulness Retreat, PeoplePack Dynamics, and a rowing experience at an Olympic training facility. After five years of developing and refining the APPE, faculty coordinators sought student feedback on the APPE beyond using a standardized APPE evaluation form students complete at the end of each rotation.
Results. The majority of students agreed with all of the evaluation items. Items with the highest mean agreement included: content from previous didactic leadership courses were reinforced in the rotation; relevance of the rotation to one’s career; rotation objectives facilitated learning; and a variety of teaching methods helped in applying knowledge to future practice. Analysis of comments regarding the leadership APPE identified three main themes: gratitude, development, and more connection.
Conclusion. An elective APPE with the primary purpose of leadership training and development can be created and incorporated into the Doctor of Pharmacy curriculum. This leadership APPE can serve as an example for other institutions interested in implementing a similar experience.
Keywords: advanced pharmacy practice experience (APPE), experiential education, leadership, student development

INTRODUCTION
There is a need to expand and improve curriculum in leadership development in US schools and colleges of pharmacy. There is support for this as leadership development is an area advocated by the American Association of Colleges of Pharmacy (AACP) Argus Commission, the Center for the Advancement of Pharmacy Education (CAPE), and the Accreditation Council on Pharmacy Education (ACPE).1,2 The pharmacy literature also supports the need for additional professional development of leadership skills in pharmacy students to advance the profession.3,4 Fortunately, over the last decade, pharmacy leaders have developed guiding principles and competencies to assist curriculum committees and instructors in the refinement of curricula.5,6 This guidance has assisted in deliberate integration of student leadership development courses, specialty tracks, residencies, and programs in the core and elective curriculum of many schools and colleges of pharmacy.5,6,7,8 These courses and programs include leadership content and assessments to increase pharmacy students’ self-awareness, relationship management, team-building, and more.9,10 Many pharmacy schools also offer specialty advanced pharmacy practice experiences (APPEs). Specialty APPE topics have included entrepreneurship, advanced community practice, clinical practice, and administration.11-13 Nevertheless, examples of APPEs that focus on the CAPE Outcomes of leadership and innovation are notably absent.14

The Doctor of Pharmacy (PharmD) program at the University of Oklahoma College of Pharmacy (OUCOP) offers a specialty track, the Leadership Degree Option...
(LDO), which consists of five elective courses and two associated APPEs, totaling 17 credit hours of coursework that students complete over three years. One of the two required APPEs for the LDO is held at the college during the month of September for all fourth-year pharmacy students enrolled in the specialty track. The month-long LDO APPE is a non-patient care rotation with a primary focus on leadership development. The APPE was designed to build upon the two previous years of didactic coursework completed in the LDO by engaging students in content and activities to practice, refine, and further develop leadership skills and experiences. The APPE activities require students to integrate and apply learning from their didactic classroom coursework in leadership to build relationships, solve organizational problems, and model effective leadership behavior. A summary of the five-year development of the leadership APPE is presented below, along with a description of the process involved in identifying and implementing rich practical experiences to facilitate leadership training and skills-building. We also describe our experiences in implementing the leadership-focused APPE, give examples of content and activities included in the APPE, and report students’ evaluation of the APPE.

METHODS

The key concepts that we used in creating the leadership APPE were based on leadership development standards and recommendations issued by AACP, CAPE, and ACPE. The program’s personal and professional development goals for pharmacy students included increasing self-awareness, demonstrating responsibility for completing goals, developing relationships, communicating effectively, empowering others, and more. The LDO, including the leadership APPE, addressed the personal and professional development aims advocated by pharmacy education organizations.

Prior to completing the leadership APPE, the LDO students completed nine credit hours of coursework on leadership. Within these courses, the LDO students completed and reviewed various assessments, including the Myers-Briggs Type Indicator (MBTI) – Step II, Thomas-Kilmann Conflict Mode Instrument (TKI), Emotional Intelligence Appraisal, Me Edition, and Strengths Finder 2.0, as well as participated in group and individual projects. The didactic content was integrated and reinforced with each experience and activity scheduled during the APPE month. First implemented in 2012, the month-long LDO APPE originally consisted primarily of content delivery and class discussion of case studies on leadership. In our inaugural offering of the leadership APPE, students spent three to eight hours each day receiving leadership development lectures and presentations, followed by time spent working on team projects.

Although students reported overall satisfaction with the LDO program, the APPE coordinators recognized a need to create a more engaging APPE experience based on the integration of active-learning strategies and other experiential modalities. Over the next few years, LDO faculty coordinators completed several professional development courses and certifications in leadership. Each year, the LDO coordinators introduced new experiences to the APPE that they had learned from their personal and professional development activities. The LDO APPE content evolved to include more topics presented using group and individual experiential-learning formats. We also added experiential activities and components that complemented the LDO didactic classroom material that students had completed in prior years. A description of the activities included in the leadership APPE is presented in Table 1. Details regarding the LDO APPE learning objectives and how this content related to the cognitive domains of Bloom’s Taxonomy and supported achievement of the ACPE and CAPE Outcomes are presented in Table 2.

All APPEs at the college are evaluated using a standardized student evaluation. Because LDO coordinators were continually developing the leadership APPE and given that the APPE was a non-patient care experience, we recognized the need to elicit additional student feedback about the rotation to complement the information the standard APPE evaluation form obtained. Such an evaluation was conducted in 2017 by adding the college’s standard course evaluation for didactic courses to the APPE evaluation form. The 23-item survey was administered to students on the last day of the leadership APPE. Responses to the evaluation items were rated using a six-point Likert-type scale on which 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree, and 6 = not applicable. Course evaluation data were analyzed using SAS, version 9.4, and reported as means and standard deviations.

Two of the survey items were open-ended response items: please provide constructive comments about the course [APPE]; and please provide constructive comments about the instructor(s). Student responses were aggregated into reviewable documents that were assessed by three researchers using latent thematic analysis. Analysts independently identified nodes by several factors: the frequency with which comments were said, specificity of detail, and extensiveness of response. These nodes were then grouped into similar themes and subthemes. Themes and subthemes were then compared, revised, and edited by all analysts until agreement on saturation of data was achieved.

RESULTS

The LDO APPE had been conducted from 2012-2017 at the time of this writing. Because the content of the
APPE continually evolved during this time, the assessment items used also changed from year to year. For that reason, we only provide feedback obtained from the 2017 cohort of LDO APPE students (n = 17). Fourteen (82.4%) of the students completed the survey. Most of the students agreed with the APPE evaluation items. None of the students chose a response of “not applicable” to any of the items. The following survey items received the highest mean scores: Early course [didactic classroom] concepts were reinforced or repeated in the course [APPE], M = 4.9; relevance of the course [APPE] to my career as a future pharmacist or practice of pharmacy was discussed, M = 4.8; the course [APPE] objectives facilitated my learning, M = 4.7; and the course [APPE] used a variety of teaching methods to help me learn and apply my knowledge to future practice, M = 4.7. There was only one response of disagreement to a survey item and it pertained to the organization and structure of the APPE content.

The two categories of free response questions elicited comments regarding the overall APPE and course faculty. In the thematic analysis of the free response data, there were five main themes and 11 subthemes created. Comments about the overall course revealed three main themes: gratitude, development, and more connection.
The theme of gratitude included two subthemes: opportunity and experience. One student stated the leadership APPE was "an incredible opportunity for my pharmacy career." Another student also shared he/she "wished all other students could experience" the leadership APPE. The theme of development included two subthemes: personal/professional growth and leadership skills. A few students felt the APPE was instrumental to their personal and professional development regarding public speaking, relationships, and focusing on values. One student stated, "The APPE provided me with tools to continue my leadership development." The theme of more connection consisted of the subtheme of structure. Several students expressed that the structure of the APPE was somewhat unorganized thematically and could benefit from rearrangement of content and experiences. The students also expressed concern about the relevance of some content and activities to leadership development.

Comments regarding the course faculty exhibited two main themes: influence and competence. The influence theme included four subthemes: positivity, inspirational, insightful, and appreciative. Several of the students shared that instructors made the experience positive and that they appreciated the efforts of instructors to make the course [APPE] a great experience. The competence theme was present in two subthemes: valuable resource and mentor/guide. Students expressed that instructors made an effort to provide leadership, guidance, and mentorship in a personal manner that exceeded the students’ expectations of the course.

**DISCUSSION**

This manuscript describes the development and structure of a leadership APPE at the University of Oklahoma College of Pharmacy, as well as student perceptions of the APPE. Our leadership APPE was designed to include experiences that complement and reinforce previous classroom coursework within a structured leadership track program. On their assessment for the leadership APPE, students expressed high levels of agreement regarding the overall benefits of the APPE and provided positive remarks about the faculty.

Our students who completed the leadership APPE shared a theme that is rarely reported in pharmacy literature: a sense of gratitude. Our use of open-ended comments to collect student feedback was valuable in identifying the impact that leadership development can have on students’ practice of gratitude. Other examples of personal and professional development content have been

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**Table 2. How the Leadership Degree Option APPE Learning Objectives meet the 2013 Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes and the Cognitive Domains of Bloom’s Taxonomy**

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>CAPE Outcomes(^a)</th>
<th>Bloom’s Taxonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply various leadership methods/approaches to addressing human behaviors in an organizational setting</td>
<td>4.2, 4.4</td>
<td>Application</td>
</tr>
<tr>
<td>Describe three energy signatures of individuals</td>
<td>4.1</td>
<td>Knowledge, Comprehension</td>
</tr>
<tr>
<td>Identify the energy signature of each individual in working groups</td>
<td>3.6, 4.2</td>
<td>Knowledge, Comprehension</td>
</tr>
<tr>
<td>Describe the role of each energy signature in relation to group organizational dynamics</td>
<td>3.6, 4.2</td>
<td>Application, Analysis</td>
</tr>
<tr>
<td>Apply knowledge of strengths, personality styles, conflict resolution, and emotional intelligence in managing organizational behavior</td>
<td>3.6, 4.1, 4.2, 4.4</td>
<td>Application, Analysis</td>
</tr>
<tr>
<td>Describe energy sources for the human body</td>
<td>2.3</td>
<td>Knowledge, Comprehension</td>
</tr>
<tr>
<td>Practice rituals for managing energy</td>
<td>2.3</td>
<td>Application</td>
</tr>
<tr>
<td>Engage in the practice of mindfulness</td>
<td>2.3</td>
<td>Application</td>
</tr>
<tr>
<td>Complete a project as assigned that supports a programmatic need for the College of Pharmacy</td>
<td>4.2, 4.4</td>
<td>Synthesis, Evaluation</td>
</tr>
<tr>
<td>Present a verbal presentation describing how leadership practice related to completion of the rotation project</td>
<td>3.6, 4.2</td>
<td>Application, Analysis, Synthesis, Evaluation</td>
</tr>
<tr>
<td>Write a self-reflection that describes how your professional and personal experiences on the rotation related to your leadership development</td>
<td>1.1, 3.6, 4.1, 4.2</td>
<td>Application, Analysis, Synthesis, Evaluation</td>
</tr>
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</table>

\(^a\)Center for the Advancement of Pharmacy Education Outcomes: 1.1=Learner, 2.3=Health and Wellness, 3.6=Communication, 4.1=Self-Awareness, 4.2=Leadership, 4.4=Professionalism.
presented in the pharmacy literature.\textsuperscript{11-15,19-21,23,24} However, the findings from student evaluations of the APPE described here are unique as student development occurred through completion of a leadership APPE within a Leadership Degree Option Program.

Our students’ comments regarding the influence of faculty in the leadership APPE reflect similar findings of a leadership elective instructed by graduate students.\textsuperscript{43} The positive remarks about faculty in the leadership APPE may be an indication that students perceive faculty as competent educators and trainers in leadership, and that faculty serve as a valuable resource for student development. Similarly, acknowledgement of faculty as mentors and guides can be attributed to the overarching goal of our leadership APPE, which is to provide specific experiences to students for individualized leadership development.

The results reported here reflect students’ evaluation of the APPE. It also is important to address how faculty coordinators evaluate student learning in various APPE activities. Like all APPEs administered by the college, the leadership APPE is graded on a pass/fail basis. We evaluate each student’s performance in the leadership APPE based on attendance, participation in and contribution to activities, submission of written self-reflections, and ability to integrate their previous didactic classroom learning on leadership with their experiential learning on the APPE.

Finally, because we as pharmacy educators aspire for all pharmacy students to achieve the CAPE outcomes regarding leadership, we offer these insights from our observations and experience so other pharmacy educators can adapt this content into their respective APPE curricula for students who may not have an opportunity to complete a leadership-focused APPE. Primarily, preceptors can review information from leadership assessments with their students, such as the student’s strengths, personality style, conflict resolution style, and other tools at the start of an APPE to increase the student’s self-awareness. Throughout the APPE, preceptors can ask students to reflect and give examples of how interactions with health care professionals and patients presented them with opportunities to use their leadership insights. Preceptors can emphasize the importance of putting leadership in action when working on a health care team for the purpose of increasing one’s capacity to build relationships and ultimately deliver optimum patient care.

CONCLUSION

An elective APPE with the primary purpose of leadership training and development can be created and implemented in the PharmD curriculum. Such an APPE should continually be reviewed for the purpose of quality improvement. This manuscript presents a summary of the history, development, and current practices of a leadership APPE that can serve as an example for other institutions that plan to implement a similar structured leadership program for pharmacy students.

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REFERENCES


