Evolution of a Cocurricular Program to Support Student Professional Identity Formation

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Abstract

Objective: Describe the development, implementation, and assessment of a cocurricular program intentionally designed to foster professional identity formation at a private institution.

Methods: A cocurricular committee was established which developed a cocurriculum program in 3 phases. The committee utilized a gap analysis to inform the development of a continuing-education-based elective program (phase I), broadened program components and enhanced assessment (phase II), and continued to strengthen select areas of the affective domains through a second gap analysis and implement a summative assessment (phase III).

Results: Over 2 academic years, the completion rates for reflections, continuing education programming, and community outreach in the most recent academic year were consistently above 80% by the final due date. Rates of the mentor-mentee meetings fell below 50%; however, this component is tracked by the faculty member and not the students. Community outreach monitoring was managed by the committee for the first time in the 2021–2022 academic year and completion rates increased from 64% to 82%. Student reflections indicated consistent progression toward practice readiness from first- to third-year pharmacy students. For the Pharmacy Affective Domain Situational Judgment test, 22% and 16% of first-year pharmacy students were flagged during the first and second year implemented, respectively, and only 8% of the third-year pharmacy students were flagged in both years.

Conclusion: Utilization of a cocurricular committee has been vital for the development, progression, and assessment of the cocurriculum at a single private institution.

1. Introduction

With the release and implementation of the 2013 Center for the Advancement of Pharmacy Education outcomes and the Accreditation Council for Pharmacy Education (ACPE) Standards 2016, programs were charged with developing curricular programming with an emphasis on standards 3 and 4.1,2 However, interpretation and implementation were left to the discretion of the institutions. As outlined in the 2019–2020 report by the American Association of Colleges of Pharmacy student affairs standing committee, programs should focus on incorporating elements of professional identity formation (PIF), which the authors describe as the process of “internalization of a profession's core values and beliefs”.3 The committee also explained that the curriculums is a natural place to incorporate activities and concepts related to PIF. It is important that curricular activities and the didactic curriculum evolve to help students identify with the pharmacy profession and to monitor their own progress. Due to the complexity of integrating a curricular program into existing structures and curricula, institutions are seeking guidance on successful implementation and looking for examples of assessment plans. The goal of this paper is to outline how 1 private institution took a stepwise approach in developing and implementing a cocurricular program to support student PIF.

2. Methods

The development and evolution of a cocurricular program to facilitate PIF at a single institution occurred in 3 phases as outlined in Fig. 1. Prior to the initiation of phase I, the program had several noncurricular graduation requirements which included development of a portfolio,
participation in Day of Service where students presented a professional poster about 1 of their required service events, a faculty mentor-mentee program, written reflections, and attendance at professional development presentations. These activities were overseen by the Office of Academic and Student Affairs (OASA).


In preparation for the release of the 2016 ACPE accreditation standards, a committee was created to work closely with the OASA to develop a cocurriculum to run alongside and in support of the curriculum to help students achieve standards 3 and 4. The committee included 4 faculty with student representation. The first charge was to conduct a gap analysis evaluating all required activities mapped to standards 3 and 4 in the didactic and experiential curriculum, student orientation, and noncurricular graduation requirements (outlined above). The gap analysis identified standards 3.5 (cultural sensitivity) and 4.2 (leadership) as areas that could be enhanced in future cocurricular requirements. This spurred the design of a cocurricular program resembling a pharmacist’s continuous professional development (CPD) which incorporated a continuing education (CE) structure. Within this structure, students select activities in categories of cultural sensitivity, leadership, and self-awareness in a flexible, self-directed manner that are meaningful for PIF. The categories of self-awareness, which can be mapped to any element of standards 3 and 4 and not originally identified in the gap analysis, serve as a leader in a student organization or as a class officer; (2) Cultural awareness: attend diversity, equity, inclusion, and accessibility programming, engage in community outreach to diverse populations; (3) Self-awareness: American Society of Health-System Pharmacists clinical skills competition, American College of Clinical Pharmacy’s clinical pharmacy challenge, State Legislative Day to enhance knowledge, skills, and confidence in areas that students informally identify as areas for development.

2.2. Phase II (2018–2021)

After the implementation of the CE program, the committee’s role shifted from a focus on cocurriculum and standards 3 and 4 to incorporating PIF more holistically. The new committee took on oversight of all cocurricular activities except community outreach which remained under OASA until phase III (Table 1). Phase II committee charges focused on review and optimization of assessment practices, standardization of the cocurricular activities, and ensuring the activities were focused on the development of the student’s progression of PIF through intentional follow through and feedback by committee or faculty mentors.

First, all existing reflections were mapped to affective domains and reviewed to ensure the emulation of CPD principles to advance student PIF (Table 1). For example, a reflection, titled Continuous Personal and Professional Development (PPD) Reflection, was updated to incorporate continuous reflection between the first (P1) and second (P2) professional year. As P1s, students develop Specific, Measurable, Achievable, Realistic, and Time-bound goals related to an area of strength and improvement that would help them to develop their identity and success as a professional. As P2s, students reflect on their progress on their Specific, Measurable, Achievable, Realistic, and Time-bound goals and identify additional strategies for growth toward PIF if the goal is unmet or to set new goals if achieved.

Second, the rubrics used to evaluate reflections were updated to assess the student’s level of introductory pharmacy practice experience (IPPE), advanced pharmacy practice experience (APPE), or practice readiness in each of the mapped affective domains. Formative assessment of affective domains and their connection to development as a professional in pharmacy is accomplished through reflections, rubrics, and discussion between student-faculty mentor pairs.

Fig. 1. Progression of the cocurriculum across the 3 phases. CE, continuing education; CPD, continuous professional development; PIF, professional identity formation; PAD-S, Pharmacy Affective Domain Situational Judgement Test.

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**Phase 1**


- **Co-curricular content:** No formal content designed at the beginning of the phase
- **Areas developed during this phase:**
  - Formation of the co-curricular committee
  - Completion of the 1st gap analysis
  - Creation of the co-curricular continuing education program

**Phase 2**

(2016-2021)

- **Co-curricular content:** Mentorship Program (reflection and faculty mentor-mentee discussions), Community Outreach (Day of Service), Foundation Development Activities (CE Program)
- **Areas Developed during the phase:**
  - Evaluation of the reflections to incorporate CPD and advance PIF
  - Standardize rubrics that are tied to practice readiness
  - Follow through on tracking completion of all requirements

**Phase 3**

(2021-present)

- **Co-curricular content:** Mentorship Program (reflection and faculty mentor-mentee discussions), Community Outreach (Day of Service), Foundation Development Activities (CE Program and Personal and Professional Development Sessions)
- **Areas Developed during the phase:**
  - Completion of the 2nd gap analysis
  - Expanding the personal and professional development activities outside of credit course
  - Development of a summative assessment of Standards 3 and 4 with the use of PAD-S

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Table 1: Details of the CE program phases

- **Phase I**
  - Standards 3 and 4
  - Didactic and experiential curriculum
  - Student orientation
  - Noncurricular graduation requirements

- **Phase II**
  - Standards 3.5 and 4.2
  - Cultural sensitivity
  - Leadership
  - Self-awareness

- **Phase III**
  - Continuous education
  - Personal and professional development
  - Community outreach
Table 1
Standards 3 & 4 Cocurriculum Activity Map After Phase III.

<table>
<thead>
<tr>
<th>Professional Year</th>
<th>Activities</th>
<th>3.1</th>
<th>3.3</th>
<th>3.5</th>
<th>3.6</th>
<th>4.1</th>
<th>4.2</th>
<th>4.3</th>
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This table outlines cocurricular activities specifically designed to help students meet standards 3 & 4 educational outcomes. Education (3.2) and Interprofessional Collaboration (3.4) are met through the required curriculum and not mapped in the above chart. Abbreviations: CE, continuing education; PPD, personal and professional development; P1, first professional year; P2, second professional year; P3, third professional year; P4, fourth professional year

3.1 = Problem Solving, 3.3 = Patient Advocacy, 3.5 = Cultural Sensitivity, 3.6 = Communication; 4.1 = Self-awareness, 4.2 = Leadership, 4.3 = Innovation and Entrepreneurship, 4.4 = Professionalism

Lastly, tracking completion rates was implemented for CE, reflections, Day of Service attendance, and mentor-mentee meetings. Students were given a deadline for all components and the committee followed up on delinquent items with reminders. Initial tracking for reflections and CE credits was through the learning management system where students self-reported on CE activities and faculty mentors completed reflection rubrics. Because the learning management system did not have reporting or aggregate data capability, tracking was switched to a competency management program. The entire cocurriculum content was thereby housed in 1 location which allowed the mapping of all activities to entrustable professional activities and ACPE standards.

2.3. Phase III (2021 to present)

After modifications over 3 years progressing toward a more holistic PIF approach, the current cocurriculum encompasses (1) Mentorship includes at least 1 faculty/student meeting per semester and completion of reflections which are evaluated by and discussed with the mentor; (2) Community Outreach includes required hours and participation in Day of Service, and (3) Foundational Development Activities which only included the CE program at the initiation of phase III. Table 1 includes all cocurricular activities and mapping to standards 3 and 4. Of note, affective domains Education (3.2) and Interprofessional Collaboration (3.4) are met through the required curriculum and thus no cocurricular activities were created specifically for these domains but could be obtained through the self-awareness CE credits.

For phase III, the committee conducted a second gap analysis which indicated positive progress toward meeting all criteria for a cocurricular program with 2 areas for improvement. First, although leadership and professionalism standards were met, additional enhancements were recommended. The PPD activities previously offered during P1 through professional year 3 (P3) orientation as part of 0.5-credit courses required relocation due to changes in the university calendar. Professional identity formation items covered during this course were related to self-awareness (4.1), leadership (4.2), and professionalism (4.4). In the transition to a noncredit course, the committee enhanced the breadth and depth of topics and intentionally organized them to progress in complexity over P1-P3 years. Sessions focused on skills and attributes, such as conflict management, mental health, well-being management, and self-reflection that are needed to be successful as a healthcare professional. The PPD activities were added to the Foundational Development Activities component of the cocurriculum program.

Second, a summative assessment of standards 3 and 4 outcomes was recommended. To provide an objective summative assessment of the program, the Pharmacy Affective Domain Situational Judgment test (PAD-S) was developed, validated, and implemented into the Spring P1 and P3 years.6-7 It is currently used to identify students who need additional coaching in each of the affective domains, and share this information with the student and their faculty mentor to inform a personalized PIF plan. The purpose of this test was to supplement self-reflection, rubric-based assessment components, inform faculty-student mentor interactions, and when employed longitudinally, provide insight into patterns indicating potential affective domain gaps that could be enhanced to develop the student professionally.

3. Results

Two years of data are available for the cocurriculum PIF program. Table 2 provides completion rates of the items incorporated into the program. At the time of publication, the due date for the 2021–2022
ademic year had not yet passed so only partial data (through June 2022) is included. Even with this partial data, completion rates for the CE program and reflections have been consistently above 80%. The mentor-mentee meeting completion is documented by the faculty and has the lowest completion rates of each of the program components. Table 3 outlines the formative assessment of all mentor-evaluated reflections between 2020 and 2022. Since reflections can be mapped to multiple standards and students complete, at minimum, 3 reflections per year, students may be evaluated more than once on each affective domain. In addition to existing cocurricular requirements, the PAD-S was implemented during the 2020–2021 year. For P1 students, 22% (9 of 44) were flagged for a lower score (below 1 SD below the mean) in 2020–2021 and 16% (7 of 45) were flagged during 2021–2022. For P3 students, 8% (5 of 59) were flagged during the 2020–2021 academic year. The most common affective domains flagged during the first year of implementation were communication (n = 5), interprofessional collaboration (n = 4), and education (n = 3). During the second year, 8% (5 of 60) were identified with the most common domains being patient advocacy (n = 5), cultural sensitivity (n = 4), and innovation and entrepreneurship (n = 5).

4. Discussion

Throughout the evolution of this program, a dedicated committee for development, modification, and assessment of all cocurricular aspects has been essential. The committee has been instrumental in the intentional incorporation of necessary affective domains, the evolution of the program to meet more holistically the diverse needs of each student, and ensuring student progression in these areas. Table 1 mapping demonstrates that sufficient opportunities exist for affective domain competency development through the cocurriculum. The goal is to focus on PIF development more intentionally through the curriculum and cocurriculum programs and is a continued effort for the committee.

The utilization of a committee has allowed for process improvement, continual assessment of the program structure, and confirmation that student progress is in alignment with ACPE standards and the college’s mission of service. Table 3 shows that student reflections appropriately demonstrate progression on the affective domains from IPPE to APPE/practice readiness across the P1 to P3 years. The committee incorporated regularly scheduled gap analyses (every 4 years) to facilitate successful and intentional development of cocurricular activities. This provides objective information to the committee on successes and areas for improvement on both items being completed and the assessment plan of the program. With the addition of the PAD-S, assessment of student achievement of affective domains is now more holistically assessed through a variety of methods including objective data from the PAD-S, reflection assignments, and direct observation through elements found in the laboratory and experiential curriculum.

Although the program is well designed, areas for improvement exist. As shown in Table 2, completion rates continue below 100%. Although a lack of dedicated personnel for oversight and tracking may play a role, the primary barrier to achieving higher completion rates is the difficulty in developing and enforcing consequences. Dedicated support staff was approved, contributing to a targeted focus on delinquent submissions. Student compliance with deadlines in a noncredit, nongraded course has been an ongoing challenge. The committee has tried a variety of penalties to encourage completion which may impact IPPE and APPE selection, delay progression to APPE, and result in withholding diplomas upon graduation. For the 2022–2023 year, there is a 3-tier process that moves students through notification, direct engagement and intervention, and disciplinary steps to motivate completion. In the area with the lowest completion rates—mentor-mentee meetings—faculty are required to document these meetings and thus low completion rates may be a reflection of documentation completion than of actual meeting rates. Ongoing education of faculty and reminders to complete this important step will be a priority for the upcoming year. Community outreach monitoring is historically an area with low completion but in the 2021–2022 academic year, oversight and management transitioned to the cocurriculum committee which has demonstrated improved tracking and higher completion rates.

Although completion of the CE requirements has the highest rates, student committee members have communicated difficulty in identifying items that count toward the CE program. The committee is working to empower student organizations to identify and design CE sessions, coordinate community outreach events, and ensure there are sufficient opportunities throughout the academic year that meet diverse student development needs in an inclusive environment. The ultimate

Table 3
Rating of Students on Scored Reflections Mapped to Items Relating to Standards 3 & 4 Between 2020 and 2022.

<table>
<thead>
<tr>
<th>ACPE Standard 3 &amp; 4</th>
<th>Assessed in Reflection (n = P1, P2, P3)*</th>
<th>Earned Level (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P1</td>
<td>P2</td>
</tr>
<tr>
<td>NE</td>
<td>IR</td>
<td>AR</td>
</tr>
<tr>
<td>3.1 Problem solving (n = 97,109, 195)</td>
<td>1 52 26 20 0 40 32 28 2 5 53 40</td>
<td>3.3 Patient advocacy (n = 89,140, 146)</td>
</tr>
<tr>
<td>3.6 Communication (n = 76, 106, -)</td>
<td>3 46 28 23 0 31 27 42 No items mapped</td>
<td>4.1 Self-awareness (n = 186, 249, 341)</td>
</tr>
<tr>
<td>4.3 Innovation and entrepreneurship (n = 97, 215, -)</td>
<td>4 57 19 20 2 44 24 30</td>
<td>4.4 Professionalism (n = 173, 191, 195)</td>
</tr>
</tbody>
</table>

Abbreviations: APPE, advance pharmacy practice experience; AR, performance is consistent with a student at the beginning of APPEs; NE, not evident; IR, performance is consistent with a student at the beginning of introductory pharmacy practice experiences; PR, performance is consistent with a student at the end of APPEs/ready for practice; P1, first professional year; P2, second professional year; P3, third professional year

* Represents the aggregate number of items the ACPE Standard was evaluated in all reflection’s rubrics completed in that academic year
goal is for the student organizations to create a calendar of available CE sessions at the start of the year so students can plan appropriately. The presence of a more robust CE schedule will facilitate self-directed selection of sessions which can be guided by the PAD-S results gathered in the P1 year. Ongoing faculty mentor training also focuses on ways to guide students to identify opportunities outside of the college to support individual PIF, and to recognize similar activities in which they already engage that could count toward cocurricular requirements.

Lastly, when students are put on an alternate academic plan cocurricular requirements become confusing to the student. Verbiage will now be incorporated into all plan of study documents explaining that students must complete the cocurricular requirements that correlate with their class standing.

5. Conclusion

Foundational elements of a successful cocurricular program to support PIF include a periodic gap analysis, mapping all program elements to target standards 3 and 4 to ensure appropriate coverage and realistic scope for a diverse student body, and holistic assessment practices. A cocurriculum committee dedicated to intentional development, assessment, continuous quality improvement, and overcoming challenges has been a crucial element to success at this institution.

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Author Contributions

All authors contributed to the develop of all sections of the manuscript.

Declaration of Competing Interests

None Declared.

References