SPECIAL ARTICLE

Deliberate Integration of Student Leadership Development in Doctor of Pharmacy Programs

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The CAPE 2013 Outcomes answered the call for increased student leadership development (SLD) by identifying leadership as a desired curricular goal. To meet this outcome, colleges and schools of pharmacy are advised to first identify a set of SLD competencies aligned with their institution's mission and goals and then organize these competencies into a SLD framework/model. Student leadership development should be integrated vertically and horizontally within the curriculum in a deliberate and longitudinal manner. It should include all student pharmacists, begin at the point of admission, and extend beyond extracurricular activities. The school's assessment plan should be aligned with the identified SLD competencies so student learning related to leadership is assessed. To accomplish these recommendations, a positive environment for SLD should be cultivated within the school, including administrative backing and resources, as well as support among the broader faculty for integrating SLD into the curriculum.

Keywords: leadership, student development, CAPE outcomes

INTRODUCTION: CAPE'S CALL TO ACTION FOR LEADERSHIP

Leadership development is a desired outcome of pharmacy curricula in the 2013 Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes.[1] This inclusion came as no surprise as numerous stakeholders in pharmacy education and the pharmacy profession made similar calls for leadership development.[2-4] As leadership has a variety of definitions depending on the context, it is important to first define it. For the purpose of this paper, leadership is defined as "the process of influencing an organized group toward achieving a shared goal."[5]

Drawing from this definition and several other sources,[2,6] student leadership development (SLD) is an intentional, individualized effort to grow the ability of all student pharmacists to lead positive change, delivered in a manner that encourages students' active engagement in leadership. This paper uses a broad interpretation of leadership, including leadership from someone with a title and/or authority (ie, positional leadership), as well as leadership that may emerge from a team as an individual guides and influences within the group (ie, nonpositional leadership). There are "big L" leaders in formal positions, such as directors, supervisors, and managers. However, every pharmacist is a "little l" leader, who can lead informally, even without a title, through peer-leading-peer relationships and by motivating others within a particular practice or on a particular shift. Both "big L" leaders and "little l" leaders are critical to the profession.[7]

In addition to the CAPE Outcomes, the importance of integrating leadership development into pharmacy curricula is noted in several areas within the Accreditation Council for Pharmacy Education (ACPE) 2016 Standards.[8] Whereas the previous standards identified leadership throughout the document, Standards 2016 groups professionalism, self-awareness, innovation/entrepreneurship, and leadership together as "Personal and Professional Development." This standard is directly aligned with

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CAPE's Domain 4, which is also referred to as the "affective domain."[1] Beginning as early as the admissions process, schools and colleges of pharmacy are to develop admissions candidate interviews that assess characteristics from the Personal and Professional Development Domain (Standard 4), including leadership (Standard 16.7). Within the pre-advanced pharmacy practice experience (pre-APPE) curriculum, curricular and, if needed, co-curricular activities and experiences must be purposely developed and implemented for students to document competency of the affective domain elements, including leadership (Standards 4.2 and 12.3). Schools are further required to demonstrate a commitment to developing professionalism and fostering leadership in students (Standard 9.1). Lastly, Appendix 1 explicitly identifies the curricular areas of professional development/social and behavioral aspects of practice as potential placement opportunities for leadership within the core curriculum.[8]

Prior to the release of the CAPE 2013 Outcomes, leadership development was primarily addressed through elective and extracurricular opportunities, mainly student governments and professional organizations.[9] This may have inadvertently conveyed the message that leadership can only be demonstrated by the select few students who are able to obtain a formal position. One of the major changes that CAPE 2013 introduces is the explicit integration of leadership into the curricular outcomes. Specifically, Outcome 4.2 sets the expectation that all graduates of doctor of pharmacy (PharmD) curricula "demonstrate responsibility for creating and achieving shared goals, regardless of position,"[1] which extends the scope beyond those students in elected or appointed roles. In addition to identifying Leadership as Outcome 4.2, several other outcomes are closely related to leadership (Table 1), and success in CAPE-identified outcomes/roles may depend on development of these leadership skills.

Whereas faculty members are generally familiar with the cognitive domain of Bloom's Taxonomy of Learning (developing knowledge and intellectual skills), little attention has been directed toward Bloom's other two domains, the affective and psychomotor.[10,11] Domain 4 of CAPE 2013 expands the academy's focus to include the affective domain. Like the cognitive domain, the affective domain takes a stepwise approach to learning on a continuum, from awareness (lowest level) to placing worth or value on a particular philosophy/behavior, and ultimately having a value system directing one's behavior that is consistent, predictable, and characteristic of the learner (highest level). Outcomes related to the affective domain have been added to the CAPE guidance in recognition of the significance of professional skills and personal attributes to the practice of pharmacy and to bridge foundational scientific knowledge with essential skills and approaches to practice and patient care.[1]

The aim of this paper is to outline considerations for curriculum committees, administrators, faculty members, and instructors in advancing SLD in PharmD curricula in a deliberate and integrated way. Specifically, this paper provides pharmacy educators with assistance in identifying an institution-specific leadership direction, selecting SLD frameworks or models consistent with a program's unique assets, defining SLD competencies, interweaving SLD from admissions through graduation, identifying teaching/learning methods for SLD, assessing SLD, and developing the requisite supportive environment for SLD. Throughout the paper, examples are provided to help schools begin the work of identifying and refining competencies, models, and pedagogical approaches for their SLD program. However, these examples are not meant to be exhaustive or exclusive. Examining and customizing the options will require the thoughtful determination and creativity of pharmacy educators at each institution. Appendix 1 provides an overview of considerations for pharmacy educators as SLD programs are designed.

COMPETENCIES AND FRAMEWORKS

Ideally, SLD will involve all student pharmacists, have a longitudinal and experiential nature, achieve outcomes that prepare student pharmacists with the leadership skills necessary for entry-level practice, and instill a purpose to engage in lifelong reflection and development. While each program's SLD curriculum may vary, elements of SLD are essential for all PharmD leadership development (LD) curricula. Individuals involved in pharmacy leadership education should review the 12 guiding principles for SLD.[3]

The guiding principles were developed through a Delphi process and represent the consensus of 26 leadership instructors on the definition of PharmD leadership instruction. It is important for these principles (Table 2) to be used at the beginning stages of SLD curricula development and referred to throughout the process. For example, the principles "leadership can be learned" and "leadership is important for all student pharmacists to develop" are overarching philosophies best applied at the beginning steps of building a SLD curriculum.

Creation of a SLD program requires the definition of the desired competencies or outcomes. Once created, these competencies should then guide all subsequent decisions regarding the content, delivery, and assessment of leadership education. Each school of pharmacy is distinctive and defining desired competencies provides the opportunity to highlight these distinctions. For example,

Table 1. Connections between CAPE Outcomes and Pharmacy Leadership

Outcome	Connection to Leadership
Foundational Knowledge (Learner 1.1)	PharmD graduates should be able to explain the importance of leadership in pharmacy; recognize that leadership comes from those with and without titles; describe the characteristics, behaviors, and practices of effective leaders; distinguish between leadership and management; and be familiar with the leadership model/framework used by the school.
Medication Use Systems Management (Manager 2.2)	In order to optimally evolve and manage medication use systems, PharmD graduates should be able to develop knowledge of an organizational culture; develop a shared vision for an initiative or project; and outline change processes.
Patient Advocacy (Advocate 3.3)	PharmD graduates should be able to empower patients to take responsibility for their overall health outcomes; advocate for a health system that represents patient interests; and shift the paradigm of health delivery to a patient-centered, team-based approach.
Interprofessional Collaboration (Collaborator 3.4)	PharmD graduates should be able to lead members of a team; apply leadership practices that support collaborative practice and team effectiveness; and collaborate with others.
Communication (Communicator 3.6)	PharmD graduates should be able to develop skills of persuasion and influence; communicate a shared vision; and communicate clearly and concisely.
Self-awareness (Self-Aware 4.1)	PharmD graduates should be able to demonstrate self-awareness in leadership.
Innovation and Entrepreneurship (Innovator 4.3)	PharmD graduates should be able to embrace and advocate changes that improve patient care; develop new and innovative services and/or practices; and identify a customized training path if a predetermined one does not exist for a specific specialty or practice area.
Professionalism (Professional 4.4)	PharmD graduates should be able to engage in ongoing personal leadership development and find opportunities for professional engagement through active membership and positional/nonpositional leadership roles.

a pharmacy program may wish to emphasize expanding rural services or legislative advocacy, if these are strong elements of their mission statement, or a faith-based institution may wish to tailor SLD education to meet outcomes specific to their respective faith. Rather than propose a specific SLD approach for all pharmacy schools, each pharmacy program should develop an SLD program to best meet the needs of the school's mission and goals.

Several examples of SLD competencies are provided in the CAPE 2013 Outcomes; however, these examples do not comprise a comprehensive set of SLD competencies, and schools will need to refine and expand on these examples to adequately describe the leadership expectations of their graduates. A recommended and overarching consideration when creating competencies is that SLD must include "doing," in addition to learning leadership facts and concepts.[12] A further recommendation is inclusion of external stakeholders in the process of setting SLD competencies, particularly those most likely to be impacted by the LD skills of a school's graduates (eg, pharmacy managers, residency directors).

Examples of LD competencies are available, and it may help to review examples prior to crafting institution-specific outcomes, paying particular attention to competencies that represent the guiding principles essential to all pharmacy LD and institution-specific goals referred to above. A list of several sources of SLD competencies is provided in Appendix 2. However, it is a small sampling of the wide variety of SLD competencies.

Ideally, a complete set of SLD competencies will include: self-focused leadership competencies (eg, self-awareness) and other-focused leadership competencies (eg, leading change, advocacy); knowledge-based competencies (eg, describing effective leadership strategies) and behavior-based competencies (eg, demonstration of team leadership); and the cognitive domain (eg, selecting appropriate strategies for facilitating change) and the affective domain (eg, development of emotional intelligence).

The development of competencies can be informed by investigation, discussion, and development of a leadership framework that reflects the mission of the institution while retaining the guiding principles. A SLD model will guide the design and placement of leadership content and experiences to ensure student mastery of the competencies. In addition, the model can help concisely

Table 2. Guiding Principles of Student Leadership Development (SLD)[3]

Motivation for Teaching and Learning: Why are we investing in student leadership development?
  Guiding Principle 1: Leadership is important for all student pharmacists to develop.
  Guiding Principle 2: Leadership can be learned.
Fundamental Precepts of SLD: What commitment are we making when we agree to invest in student leadership development?
  Guiding Principle 3: Student leadership development must focus on student self-development.
  Guiding Principle 4: Leadership development should take place in a wide variety of settings including didactic curriculum, experiential curriculum and extracurricular involvement.
  Guiding Principle 5: Leadership development requires many "teachers" from whom students can learn.
  Guiding Principle 6: A person's leadership development is continuous.
Core Tenets of SLD: What do students need to understand?
  Guiding Principle 7: Anyone has the potential to lead regardless of background, position, or title.
  Guiding Principle 8: Leadership is a choice.
  Guiding Principle 9: Leadership is principle-based and rooted in the common good.
  Guiding Principle 10: Leadership involves relationships with people.
  Guiding Principle 11: There is no single right way to lead.
  Guiding Principle 12: Leadership and management are distinct activities.

communicate the SLD curricula to all stakeholders, including its fit with the institutional mission and overall curriculum. Often an SLD model will organize the leadership learning competencies by theme. In some cases, an SLD framework will include information about when in the curriculum a certain set of competencies will be mastered. Ideally, a SLD framework will include elements of self-focused and other-focused LD.

Kouzes and Posner's Five Practices of Exemplary Leaders (ie, Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart)[13,14] is an example of a model for SLD that readers are encouraged to review. The National Public Health Leadership Institute uses a framework comprised of three core areas: personal growth for leadership excellence; leading organizational change; and community building and collaborative leadership.[15] In *Heroic Leadership*, Lowney proposed a LD model derived from Jesuit best practices comprised of four pillars (ie, self-awareness, love, ingenuity, and heroism),[16] elements of which may appeal to faith-based institutions.

There are several other LD models regularly used in higher education, as well. One example is the Social Change Model of Leadership Development, which emphasizes three different perspectives (the individual, the group, and the community/society) and includes critical values, such as consciousness of self, collaboration, common purpose, and citizenship.[17] Another example is the Relational Leadership Model, which focuses on relationships being the key to leadership effectiveness through leadership actions that are inclusive, empowering, purposeful, ethical, and process-oriented.[18] Other models

are available, and schools should consider which model(s) best fit their mission and approach to SLD.

PLANNING A SLD PROGRAM

Once the competencies have been defined and a framework for SLD has been created, a plan for integrating leadership education content and experiences needs to be created. This can begin by focusing on leadership in recruitment and admissions. The APhA-ASP Task Force on Pharmacy Student Professionalism (TFOPSP) identified recruitment as an important opportunity to "emphasize the professional characteristics of pharmacy and pharmacists."[19] Specific elements to emphasize could include the need and expectation for leadership in pharmacy.

Schools should consider mechanisms for exposing prospective applicants to the pharmacist's leadership role and responsibility at career days, during open house and other events, and in promotional literature. In addition, guidance counselors and advisors should be made aware of the desire for candidates with leadership experience and/or potential. In the admissions process, specific competencies to emphasize might include: recognizing that leadership comes from those with and without titles, describing the characteristics of effective leaders, and demonstrating self-awareness in leadership.

Although there was controversy concerning leadership within admissions criteria, the 2008-2009 American Association of Colleges of Pharmacy (AACP) Argus Commission agreed that "there is a role for placing some level of emphasis on identification of leadership potential as a function of the admissions process."[6] The TFOPSP

agreed that admissions "is a crucial step in the development of *professionalism* within which *leadership* is a vital component."[19] Considerations for admission criteria are prior experience with leadership and advocacy, oral and written communication skills, and interpersonal skills.[6] These criteria are consistent with CAPE 2013 Outcomes that similarly suggest PharmD programs employ an admissions process offering balanced consideration of experiences, attributes, and academic metrics, all of which are to be considered in combination and used to determine how any individual PharmD applicant might contribute value as a student pharmacist and as a future pharmacy practitioner.[1]

Leadership interests, experiences, and capabilities can be explored through existing admissions requirements. A paper preparing participants for the 2009 AACP Curricular Change Summit argued that the required interview should be structured to provide educators the opportunity to determine leadership capabilities, while also allowing for determination of other desirable skills (eg, critical thinking, motivation, knowledge about the pharmacy profession, and/or health care) or attributes (eg, caring, empathy, social responsibility).[20] Further, the multiple mini interview (MMI) assesses leadership skills and potential through a series of situational interviews focused on qualitative and/or noncognitive attributes of the candidate.[21] An on-demand written essay during the course of an interview day or a supplemental question on the admissions application could likewise be structured to assess leadership attributes of prospective students.

Student Leadership Development at Orientation

Another critical element of SLD is the expectation of leadership from the outset of matriculation.[6,19,22] From the beginning, schools should inculcate the basic principle that "leadership is a professional obligation," and, to that end, orientation should emphasize leadership by all as essential to the future of the pharmacy profession, essential to developing and implementing new pharmacy services designed to improve patient outcomes, and essential to society.[9,22] Foundational leadership competencies can be addressed at this preliminary juncture, including basic leadership knowledge such as what leadership is.[2] Specific competencies might include the ability to: explain the importance of leadership in pharmacy; recognize that leadership comes from those with and without titles; distinguish between leadership and management; and describe the characteristics, behaviors, and practices of effective leaders.[2] Leadership is a component of professionalism.[19] Therefore, typical orientation activities, such as examination of the Oath of a Pharmacist,[23] Pharmacist's Code of Ethics,[24] or Ten Traits of a Professional[19]

could be expanded to specifically emphasize leadership. In addition, leadership activities may align well with planning for a student's professional development.

Student Leadership Development in Curricula

Leadership development is not defined by, nor will it be successfully cultivated by, a single course in leadership. Ross et al worked to identify "characteristics and quality indicators of best practices for leadership and advocacy development in pharmacy education" in US pharmacy programs. In a phone survey regarding courses, processes, and noteworthy practices for leadership and advocacy development, 54 institutions provided information. Task force recommendations were derived from the survey results, literature review, and expertise of task force members and included a recommendation encouraging schools to "plan for both leadership and advocacy development as a thread through the curriculum, co-curriculum, and extracurricular activities."[9] Since SLD involves developing skills and behaviors over time, it can and should occur throughout the curriculum.

Integration should occur both horizontally and vertically. Effort will be needed to effectively and sustainably integrate leadership into the student pharmacist experience. Attention must be paid to ensuring sufficient SLD support (environment, mentors, advisors, role models), multiple opportunities for students to "lead" and to "practice" leadership skills, and appropriate assessment of whether programs are achieving their respective targeted SLD competencies.

When considering where leadership might be developed within pharmacy programs, it is important to recognize that professionalism, advocacy, management, and leadership are interconnected, but not entirely inclusive of one another.[25] In fact, leadership, as a topic, is logically connected to outcomes defined in CAPE 2013, such as Communication (Communicator), Advocacy (Advocate), Management (Manager), Professionalism (Professional), and Innovation and Entrepreneurship (Innovator) (Table 1).[1]

As schools solidify an approach to these topics, the unique connection to leadership should be explored and SLD competencies incorporated. For instance, a course on management could include leadership competency development around organizational culture and change processes, such as creating urgency, building guiding coalitions, and formulating a shared vision. An interprofessional course could include competencies related to team leadership, such as building trust, engaging in constructive debate, and creating accountability. A drug development sequence could include personal examples from researchers that highlight pursuit of the common

good or staying the course in the face of opposition. A professional development series could include activities and assessments related to building self-awareness as a leader, such as emotional intelligence work. Speakers may be able to share examples of leadership. For example, rather than merely presenting their final discoveries and results, a presentation by a medicinal chemist might focus on the trial-and-error process and resilience en route to developing a new compound. A clinical faculty member could discuss the process of learning about organizational structure as he or she navigates the research project.

The work of integration is complicated not only by introduction of leadership-related topics, but also by the need for competency development. For instance, demonstrating the ability to lead a team is different than understanding the principles of team functioning. The school's specific competencies will need to guide the amount and type of LD integration within courses. Higher-level leadership competencies may require more time, reinforcement, and opportunities to practice within the curriculum.

Interprofessional education (IPE) is increasingly important in PharmD curricula.[26,27] Poirier and Wilhelm used a multi-professional faculty seminar to identify opportunities for interprofessional education with one discussion devoted to exploration of leadership and advocacy opportunites.[28] Fifty-four health professions faculty members attended this one-day seminar, which allowed attendees to share experiences in a morning session and was followed by afternoon planning time in round tables. During the planning, participants identified competencies to be addressed, effective teaching principles, and next steps for development of interprofessional opportunities.[28] This process could be replicated and/or modified to explore collaborations with other health professions in teaching SLD and/or creating interprofessional SLD opportunities.

Leadership development activities should be direct and deliberate. Some administrators, faculty members, or students may assume that SLD will occur in an indirect manner as a byproduct of student engagement in certain cocurricular or extracurricular activities, such as participating in service days or working in student organizations. These activities may contribute to LD in some students. However, the current atmosphere of health care reform, and the opportunities this atmosphere offers to the profession of pharmacy, calls for the same intentional and deliberate approach to SLD for all students as with other topics, such as the pharmaceutical and clinical sciences.

In addition, explicit attention to leadership skills is needed within these activities. For example, a legislative day, typically involving a visit to the state capitol to meet

briefly with a lawmaker, is a common activity in pharmacy programs. The visit often carries expectations of leadership knowledge or skill development that may be acquired indirectly. This might occur, for instance, if lawmakers share their personal leadership journey or a story of navigating a leadership challenge. The LD from this experience can be made more direct and deliberate by developing specific leadership-related objectives, assigning and assessing legislative day activities before and after the visit, and connecting the event with a required course. For instance, if addressing apprehension about legislative advocacy is a goal, group activities addressing effective methods of lobbying for legislative change might be followed by personal reflections on advocacy skill development.

Introductory pharmacy practice experiences (IPPEs) and advanced pharmacy practice experiences (APPEs) constitute a major portion of a pharmacy student's opportunity to observe, practice, and develop leadership skills in the real world context of pharmacists, patients, health care professionals, and practice challenges. As such, SLD should be longitudinally threaded throughout IPPE and APPE experiences. Again, a school's SLD competencies will direct the types of activities. However, competency development should optimize access to real-world challenges. For example, a community management APPE may involve students in developing a new pharmacy service, allowing them to hone skills in visioning and developing buy-in. A research APPE might include discussion of the strategies to secure support for a new line of inquiry, allowing students to see leadership attributes and skills such as purpose-driven resilience and response to criticism. A patient care APPE might involve participation in a clinical team working to reduce population lipid levels, allowing students to see the process of gathering collective wisdom to generate new approaches. Schools may want to work with preceptors on defining leadership-related competencies for IPPEs and APPEs and developing and sharing methods for students to exercise leadership skills in practice settings.

Cocurricular and Extracurricular SLD

While core curriculum is vitally important, student competencies are also influenced by cocurricular and extracurricular activities. Cocurricular activities are required experiences conducted outside of a course.[29] An example of an SLD-related cocurricular activity could be a hill visit to meet with a legislator one-on-one or as a small group. While extracurricular activities (ECAs) may be coordinated by the school, they may not be explicitly connected to academic learning.[30] In pharmacy education, ECAs commonly refer to student involvement

in professional student pharmacist organizations.[31] To strengthen SLD programs, schools should maximize co-curricular and extracurricular opportunities.

The lack of an explicit academic tie to ECAs makes them difficult to develop and support. However, a 2009 AACP Council of Faculties Task Force called for SLD and for institutions to recognize, encourage, and support the vital role of student organizations in this regard; work with student organizations to provide leadership and advocacy development opportunities; and collaborate on development of specific activities to enhance SLD.[9] Schools can partner with student organizations and other stakeholders to facilitate and recognize student participation in extracurricular activities that advance SLD.

Mort et al designed a leadership program that synergized with extracurricular opportunities.[32] Students received didactic instruction on leading change, leadership styles, leadership behaviors, and qualities of a successful leader. In addition, the program required leadership service (eg, professional organization leadership, coordinating a new initiative, leading policy development, leading a research protocol) and a report on the role chosen and why, positive and negative experiences, and the effect of the leadership experience on future leadership plans. This requirement was part of a larger required leadership program that also included interviewing a leader and professional business meeting attendance.[32]

Synergies can also be created with existing leadership initiatives. Chesnut and Tran-Johnson implemented a Student Leadership Development Series that was designed to supplement a speaker series available to all students.[33] Students applied to the program, which met for two hours each month over the academic year to hear the guest speaker followed by facilitated small group discussion. Implementation forms were completed to help examine learning and aid in application. Participants also completed a poster on a self-selected leadership topic, and the program culminated in a "personal leadership platform" paper describing the student's philosophy on leadership, growth and development as a leader, leadership beliefs and strengths, and plan for continued leadership development.[33]

Haber and Buckley worked to support student organization leaders through a leadership journal club.[34] Following a model by Wombwell,[35] six leadership concept areas were defined and one article was selected for each area. To further enhance cocurricular and extracurricular options, schools should consider the role of student leadership retreats,[36] institutes,[37] longitudinal development programming,[33] and joint leadership conferences with state pharmacy associations.

Postgraduate Leadership Development

During the PharmD program, students should be encouraged to consider leadership development following graduation and be informed about postgraduate LD opportunities. Individual fellowships and graduate programs may include leadership development opportunities. In addition, pharmacy residencies promote competencies that expressly include "exercising leadership and practice management skills" (ASHP Residency Outcome R3).[38] A number of programs have reported on developing leadership skills in residents.[39-41]

As schools support local residencies, and fellowship and graduate programs, those programs and PharmD programs may be able to share LD resources. In addition, opportunities for joint LD events or programming with pharmacy students may exist. In one model, Patterson et al developed an elective course focusing on leadership development for second-year and third-year pharmacy students, which was designed and taught by four graduate students under the mentorship of two faculty members.[42] Implemented as a flexible, 1-3 credit leadership elective course taught by graduate students, it used limited school resources in an innovative way while offering leadership development benefit to both student pharmacists and graduate students.[42]

TEACHING AND LEARNING METHODS

A variety of methods beyond lecture can be used to ensure students receive practice in skill sets germane to SLD. Students will learn about basic definitions through reading and lectures, but discussing cases, reflecting on authentic situations, practicing in experiential environments, and participating in debates with other students, faculty members, and leaders in the community will help students put the definitions learned into action. Although sometimes developed for undergraduate students, resources available through the Association of Leadership Educators,[43] the National Clearinghouse for Leadership Programs,[44] and the Journal of Leadership Education[45] may be useful as schools consider teaching and learning methods.

Student Leadership Development in Higher Education

Pharmacy is not alone in its desire to support leadership development in students. Within higher education, the concepts of leadership are taught to students in diverse fields of study, demonstrating that no one institution, field of study, or profession has exclusive claim to the development of future leaders. As pharmacy schools seek to evolve SLD, much can be learned from other fields. For example, Maellaro and Olsen wrote of the importance of

self-awareness and the journey to developing deeper knowledge of self through reflection.[46,47] Maellaro described the process by which graduate-level students taking a leadership and organizational development course within the University of Dallas College of Business were able to engage in a fuller and more complete reflective process. She argued that students asked to reflect were typically completing the process only halfway. Specifically, students may have been able to describe experiences they had and to reflect on consequences of those experiences to themselves or others, but they may not have taken the time to construct plans on what they would do differently themselves to obtain a more desirable outcome in the future. Using a "learning journal assignment" structured according to Kolb's Experiential Learning Model,[48] Maellero described a process that engaged students in deeper reflection and development of action plans that beget new experiences.[46]

In an undergraduate leadership development course at Saint Michael's College, Olsen discussed the use of student portfolios in an experiential capstone as a method to help students gain self-awareness and to provide them with a tangible product to help in their career development. Portfolio contents included reflections and artifacts, such as letters of recommendation and certifications geared towards integration of lessons, experiences, and the program's educational outcomes.[47] In assignments, Roberts used questions that asked about students' strengths and weaknesses, which required students to look back at prior work and connect class work with their lives outside of class.[49] Roberts introduced the concept of reflective writing assignments in a "learning journal" to students in various undergraduate courses, such as organizational behavior, team development, leadership philosophy among others. She also introduced this strategy into a master's level human resource management course.

Roberts also discussed various forms of reflection and emphasized the importance of reflection not just during an activity and in the moment, but also before and after the experience.[49] Others advocate for the importance of structured journaling to gain insight into self within a semester-long term,[46] an academic year,[47] or as part of a longitudinal and multi-year capstone course asking students to consider their career plans after graduation while engaging in related experiential learning opportunities.[50] Additionally, several authors advocate for the development of self-awareness in SLD through reflection and self-exploration of one's strengths.[49,51]

Smith and Roebuck added that connecting students to current and existing leaders was of utmost importance to gain awareness of the different pathways moving toward leadership, describing a process by which students

identified either a positional leader, or past or current mentor, to interview. This technique was used in both undergraduate foundational courses on the theories and models of leadership and cultural and global leadership, as well as graduate level courses focusing on women's leadership. While the process for interviewing the leader was to be developed and led by students, postinterview reflective questions were consistent for all students and asked students to reflect on the reason for selecting the leader, specifics about the leader's position and philosophies, views, thoughts, and suggestions, as well their learning and how the learned ideas either validated or challenged the course lessons.[52]

Additional reports derive leadership learning from examination of pop culture. For instance, Hall advocated for examination of leadership themes within pop music genres.[53] He discussed music from artists, such as Natasha Bedingfield, Black Eyed Peas, Natalie Grant, and Nickelback, as touching on themes in transformational leadership and emotional intelligence.[53] Linn advocated for an activity requiring future school leaders to identify with heroes, such as Harry Potter, Spiderman, or Batman, as a means to examining vision for self.[51]

To help students demonstrate a commitment to leadership development, Boyd and Williams described an approach to individualized, self-directed learning through "personal growth projects."[54] Their approach was structured to balance a learner's independent thought and development with ample structure, feedback, and guidance to propel students toward achieving learning in areas they determined to be valuable and applicable to their lives and career goals. Students in their undergraduate leadership course were asked to identify five things they wanted to learn. Receiving direction from faculty members, students were then guided toward an appropriate topic and then through the steps of meaningful learning using reflection and introspection. A wide range of focal areas were selected by students, such as obtaining a specialty certification (eg, CPR, first aid), establishing better relationships, learning a new hobby (eg, instrument, golf), and learning a new skill (eg, home remodeling, basic plumbing). As students worked to develop these skills, they were engaging in transformational trial and error in the same ways that developing leaders must learn to take on new projects, work with others, maximize the results of both successes and mistakes, and apply new ideas towards their personal growth. At the end, students were responsible for addressing introspective questions that engaged them in a deeper understanding of concepts underpinning their chosen topic and opportunities for further areas of personal growth. Through this method, students became catalysts and active drivers in their own learning and

decided the direction of their learning. They decided what they would learn with the guidance of their faculty members and took responsibility for the development of their own goals, which contrasts to other teaching styles that start with the professor's targeted objectives and do not engage students for input regarding learning goals at those early stages. A similar process was described in a pharmacy leadership course, using the continuing professional development process.[55]

In order to gain experience with customizing LD to their own needs, schools are urged to consider methods to assist students in self-assessment, planning, action, and evaluation related to their own personal leadership development. Case-in-point (CIP) teaching, developed by Heifetz, Grashow, and Linksy, in collaboration with Harvard Kennedy School of Government, is discussed in Daloz-Parks's *Leadership Can Be Taught*.[56,57] Case-in-point uses discussion of students' leadership experiences, along with their actions and behaviors, to illuminate leadership theory and practice. As each student's leadership experiences and approach are discussed by the class, the instructor draws out the differences between authority and leadership, technological problems and adaptive challenges, power and progress, and personality and presence.

Case-in-point teaching seeks to engage students in both the cognitive and noncognitive aspects of what they are learning, while providing them with a view of how these aspects fit into the larger world, helping them "move to the balcony." The instructor acts as a facilitator probing student intentions, naming and observing patterns, and confronting factions or groups as they discuss the case. Through CIP, students are able to reflect on and explore their current ideas related to leadership, engage in self- and peer-dialogue about contrasting and conflicting views, and explore new levels of understanding and cognitive growth.

The process is transformative and helps students learn the skill of looking for bigger picture patterns and interactions, which will guide them to more effective strategies for confronting challenges. Through guided large group and small group discussion, coupled with reflection on personal experience, students learn about authority, power, controlling pressure, intervening productively, giving the work back, and a host of other strategies related to adaptive leadership.[56,57] The value of CIP, as a method of "learning by doing" within the classroom, should be explored further in pharmacy education.

Student Leadership Development in Health Professions Education

Other professions have explored the need for SLD and have published work describing program initiatives centered on instilling leadership attributes in students.

Investigators from programs in dentistry,[58-61] medicine,[62,63] and physical therapy[64] have conducted surveys and interviews of students, academic administrators, faculty members, practitioners, and alumni to determine the need for teaching SLD and perceptions on the best approach to teaching it.

Programs took inclusive approaches, engaging all stakeholders in generating their proposals for adding SLD to curricula. General findings from surveys suggested that leadership development was important to all stakeholders, including students. For students, however, findings supported identifying ways for them to see the immediate and longer-term value of SLD, as well as the applicability of SLD to their development as health care providers early in the curricula.

As professional programs implemented SLD initiatives, opt-in (ie, not required) didactic, experiential, and blended didactic/experiential curricular elements were often created.[58,59,64-70] Examples of opt-in initiatives included taking active administrative roles at student-run clinics, which entailed managing schedules, peers, patient assessments, finances, and community services,[64,65] serving as a mentor or advisor to underclass peers,[68] receiving mentorship opportunities with faculty members and administrators[59,68-71] and designing a SLD experience for future students.[70] Other examples of these initiatives included curricular coursework and required elements for all students within medicine,[66,67] dental hygiene,[71,72] and nursing.[73]

In medicine, implementation of leadership lessons were discussed among eight medical programs, leading to the adoption of SLD practices unique to each program yet founded on common SLD frameworks.[66] Medicine reported course-specific work, such as assigning students to the role of team leader within gross anatomy lessons to help identify one's own leadership style.[67] In dental hygiene, leadership and professionalism were interwoven into the curriculum through service learning projects that involved helping patients in the immediate community and guided reflections on the impact of those experiences.[71] Dental hygiene reported on advocacy projects aimed at developing leadership skills and ensuring students were exposed to the importance of advocating for self and one's profession through program lessons linked with relevant professional issues.[72] In nursing, programs used simulated patient-care situations to teach practical and leadership skills, including effective communication and interprofessional skills needed to move a diverse group of health care providers toward the common goal of optimizing care for patients.[73]

In the examples profiled here, the most common method of evaluating student experiences and learning in required and nonrequired activities was through

perceptions surveys and structured interviews with students to explore the impact of the courses and experiences. Additionally, satisfactory performance on various projects and meeting all deadlines were factored into the evaluation of student learning. In pharmacy education, it would useful to collaborate with other professions to create SLD opportunities, based on the common desire to advance the leadership skills of students, maximize their positive impact on patient care, and enhance their influence in an evolving health care environment.

ASSESSMENT CONSIDERATIONS

As schools examine the CAPE 2013 Outcomes and seek to expand their commitments to SLD, the school's assessment plan will need to evolve and focus on student learning related to leadership. Leadership assessments may come from many areas of the curriculum. In this plan, leadership competency attainment will be the major focus. However, leadership growth over time is also important.

As in any effective assessment plan, assessments should be well aligned with the competencies being developed. For instance, a foundational knowledge oriented competency, such as "distinguish between leadership and management," might best be assessed with an assignment where students analyze their participation in a project, isolating and describing the leadership and management functions. This assignment might be embedded in a course and assessed using a rubric, with a defined score designating the desired level of competency.

For other competencies, such as "lead members of a team," self-assessment may need to be coupled with observer assessments (eg, peers, instructors, supervisors, preceptors). In addition, assessment may need to occur in situations with increasing complexity (eg, short-term task, long-term change initiative). Context and progression are also important to consider. For instance, it may be helpful to move from paper-based scenarios, to personal analysis of past instances with team leadership, to observed, authentic cases in early experiential settings, to focused skill assessments while working in a team.

Ultimately, SLD involves more than studying leadership. The scope and duration of student leadership roles may vary. However, schools must endeavor to ensure that students "do" leadership.[12] As students practice leadership skills, the competency being developed must be assessed. For instance, if students are to gain experience in facilitating change, student learning might be assessed by participation in a new initiative that is documented real-time in a log or journal (eg, list of efforts to implement Kotter's Eight Steps[74]). Alternately, these experiences may be documented through postexperience reports of the activities or projects undertaken (eg, executive

summary of the process of implementing a new health fair). Logs or reports may be coupled with reflections that require students to move beyond describing their contributions and include critical analysis and/or evidence of their influence. Portfolios may be used to collect various logs/journals, reports, reflections or critical analyses that demonstrate competency attainment. Portfolios might also include a student's leadership development plan and updates on accomplishments related to that plan. As these materials are reviewed, schools are encouraged to use the information gleaned from student learning to improve the SLD process.

While the core curriculum should provide the opportunities to develop competency, leadership experiences may also be developed through participation in student organizations, work and volunteering in the community, among other activities. Approaches to assessment should consider methods for prompting students to identify and examine these experiences. When such experiences help a student achieve a competency, assessment methods should be capable of documenting and evaluating them. In addition, student learning assessment should not be confused with program evaluation. Student satisfaction, effectiveness of teaching, and program mission/goal achievement will likely also require examination as SLD programs evolve. However, these program evaluation efforts are not a substitute for measures of student ability.

Facilitating Self-Awareness

To facilitate the self-awareness integral to leadership development, schools may wish to have students complete one or more inventories or instruments that provide insight into personality, communication styles, emotional intelligence, talents, or other personal attributes. The Clifton Strengthsfinder is a tool used in pharmacy education to facilitate awareness of talents and their use in leadership roles.[39,75-78] In making selections, schools should consider the resources required to administer the instrument, including assisting students in understanding and using the results. Moreover, while taking the instrument can provide interesting "aha" moments for students, workshops or debriefing sessions can add to the understanding of the concepts assessed and enhance the utility of the assessment for the participants. In addition, deliberate use of the findings, repeated reference to the concepts assessed at various points of the curriculum, and personalized development plans are encouraged to maximize the utility of these types of tools.

Given the commitment required to optimize use of these tools, schools are encouraged to select instruments carefully. Consideration might be given to the

instruments used with pharmacists locally, providing students, faculty members, and preceptors with common terminology. In addition, a sufficient cohort of faculty members should be trained/experienced in their use. Furthermore, schools should consider the value in having all faculty members and staff take the same instruments as the students, further increasing the opportunities for conversation, education, and support.

Approaches to Assessment

Schools may wish to utilize commercially available instruments or published instruments that assess specific leadership abilities or behaviors. Selected instruments should be aligned with the leadership model/framework adopted by the school. For instance, the 2008-2009 AACP Argus Commission advocated for using the 5 Practices of Exemplary Leaders model with student pharmacists.[6] This model includes five major areas of leadership behaviors: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. If a pharmacy school adopts this model, there is a commercially available self and observer assessment of the 30 behaviors associated with these five practices, The Student Leadership Practices Inventory.[79-81]

If a school's program aligns more with transformational leadership, servant leadership, authentic leadership, or any number of leadership frameworks/models, there are associated instruments that attempt to measure prominent aspects of those models. Schools are encouraged to identify a leadership model/framework and then examine instruments associated with that framework/model.

From a developmental perspective, instruments that focus on the assessment of behaviors vs the assessment of attitudes may be particularly valuable. Instruments with a self and an observer component can also be helpful. Work is needed to examine the value of available leadership development instruments used with pharmacy students. For example, some instruments may or may not be designed or validated for pre/post use to assess growth. As schools gain experience with these instruments, sharing the results and an evaluation of usefulness through scholarly dissemination is encouraged.

Because of its longitudinal and developmental nature, leadership will likely require unique and innovative approaches to assessment. Moreover, there may be a role for assessment of self-assessments. For instance, students could be asked to document and examine the significant milestones in their leadership history. These narratives could then be assessed by instructors using a rubric specifically developed to identify phases of leadership identity development[82,83] or other relevant indicators of

growth and/or development. This process could provide the school with insight into the cohort of students, which could aid instruction and continuous quality improvement of the SLD program.

In addition, assessing sequences of assignments may have a role in understanding a student's development over time. For instance, students might complete documentation/reflection related to a leadership competency (eg, motivating and encouraging others) over a sustained period of time. Perhaps this competency is addressed through a series of assignments embedded in a professional development sequence and several introductory practice experiences. Then, students might review the series of assignments and perform an analysis of their own development. This collection of assignments and critical analysis of them could then be assessed, perhaps by a panel of faculty members, for growth and indicators of competency attainment.

Leadership development could also benefit from assessments and evaluations completed postgraduation. This may mean revising graduating student and alumni surveys to more carefully assess leadership competencies, such as success in motivating and inspiring others toward an enhanced pharmacy role. In addition, more qualitative forms of assessment and evaluation may be useful, such as interviews on use of leadership knowledge/skills or stories describing leadership successes. In addition to input from graduates, it may be helpful to include that of employers, residency directors, and colleagues.

CREATING AN ENVIRONMENT CONDUCIVE TO SLD

In order to achieve sustainable SLD in pharmacy education, schools must create an environment that will support leadership development for all students. Based on publications in pharmacy education, a number of factors are important for establishing a culture of leadership development. Leadership role models are needed both formally, such as advising student government associations, and informally through daily acts of leading by example.[6] Others state the importance of leadership role models holding offices in local, state, and national organizations.[9]

In addition to faculty role models, pharmacy administrators and staff should be included[3] because "a commitment to leadership must be modeled by all of those with whom students are in contact."[6] Considering Kouzes and Posner's five leadership practices, faculty members are important in "Modeling the Way" and "Encouraging the Heart" (ie, modeling the importance of leadership and celebration of the success of others, including recognition of students for leadership accomplishments).[13,14] As schools consider the development of faculty members

and alumni, opportunities for support and expansion of leadership role models should be explored.

Visible and Intentional Institutional Commitment

In addition to being role models, faculty members and administrators should weave SLD into the mission and goals of the school.[6,9] An SLD-supportive environment will require adequate faculty, staff, and other instructional resources. To ensure financial support and performance measurement, support for SLD must include administrators responsible for resource management.[6] If budgeting is linked to strategic planning, leadership goals can only be achieved if SLD is included in the school's strategic plan.[3] In addition, incorporating LD goals into the school strategic plan can draw attention to the message of school faculty members and administration concerning the relevance of leadership training and encourage student pharmacists to perceive leadership as being attractive and achievable.[2] If leadership development is absent from the vision, mission, and goals, a school may struggle to achieve many of the Argus Commission's requirements for a sustainable system of leadership development, including the development of new and support of existing postgraduate programs.

The 2009 AACP Council of Faculties Task Force wrote of the importance of the "Creation of a culture of expectation for involvement as leaders" and reported that survey respondents noted the importance of developing a culture that expects students to become leaders upon entry into the program.[9] In addition to acting as role models, faculty members and administrators can contribute to an environment that is propitious to the development of student leadership in a number of ways. Faculty members could work with student organizations to provide criteria for leadership that supports nonpositional and positional leadership and distinguish leadership functions from management functions. These could be used in organization admissions (eg, Phi Lambda Sigma) or recognition (ie, award) processes. Kotter's descriptions of leadership and management could be helpful in this regard.[84] In addition, student organizations could be a powerful force in attempting to dispel leadership myths and resolve confusion related to leadership.

Supporting Faculty Members in Leadership Development

To achieve the goals listed above, proper faculty support and resources are necessary. The 2008-2009 Argus Commission commented on faculty workload, stating "It is essential that faculty position descriptions and evaluation systems place appropriate emphasis on faculty leadership development activities."[6] As with students,

schools should recognize positional and nonpositional faculty leadership roles.[9] Support should be provided for development of leadership programs, student organization advising, and student leadership mentoring. To recognize participation, these roles could be listed as a faculty service responsibility. In addition, these roles should be profiled as evidence supporting achievement of excellence during the promotion and tenure, annual evaluation, and merit increase processes.

The culture of the school should also stress the importance of supporting faculty leadership development with appropriate faculty development, mentoring and reward systems."[6] Specifically, Kouzes and Posner mentioned the need to support identification of and reflection on leadership approaches.[13] The Myers-Briggs Type Indicator and the Clifton Strengthsfinder are both examples of resources that help build awareness of personal assets that can be used in leadership.

Providing monetary support and opportunities for faculty members to participate in local, state, and national leadership development opportunities is also needed. The AACP's Academic Leadership Fellows Program (ALFP) aims to address the needs of academic pharmacy and cultivate promising pharmacy faculty members for roles as future leaders in academic pharmacy and higher education.[85] The American College of Clinical Pharmacy's (ACCP) Leadership and Management Certificate Program (LMCP) aims to develop leadership and management abilities designed for those currently in leadership or management positions or who aspire to pursue leadership positions.[86]

These programs, as well as institution-specific programs, may be useful in developing faculty members and preceptors to become stronger instructors and coaches in SLD programming. In addition, there may be opportunity to conserve human and financial resources by establishing partnerships and collaborations for faculty LD with other pharmacy schools and health professions.[9]

A number of the 12 Guiding Principles for LD will likewise require that faculty members have adequate resources at their disposal. If pharmacy education is to embrace as a guiding principle that "leadership is important for all student pharmacists to develop" and to have the process and structure in place to support new standards related to SLD, then sufficient faculty members and staff need to be available to support the work. Using the phrase "Student leadership development must focus on student self-development" as the compass may also require the purchase of additional instructional resources, such as those to support student identification of individual leadership strengths, talents, and emotional intelligence.[3]

CONCLUSION

Student leadership development in pharmacy education is in a state of transition from providing LD for some students, to providing LD to all students in an intentional manner integrated throughout the curriculum. To support schools in making this transition, next steps for the members of the academy include further examination of existing SLD work within and outside of pharmacy, implementation of new SDL initiatives, and dissemination of experiences to benefit the pharmacy education community. Ongoing, evidence-based discussions will help build consensus among pharmacy leadership educators on the depth and breadth of SLD and identify effective models, activities, and assessments. Determination and creativity will be required to create an environment conducive to SLD, including a unified vision and resources.

Achieving the leadership outcome in the CAPE 2013 Outcomes will require intentional planning and dedicated implementation involving curriculum committees, administrators, faculty members, and leadership instructors. A strong SLD program will involve all student pharmacists, focus on preparing students with the leadership skills necessary for entry-level practice, and instill in students an intention to engage in lifelong leadership development. Effective SLD will involve exploring the interfaces between leadership and other CAPE 2013 Outcomes, such as Communication (Communicator), Advocacy (Advocate), Management (Manager), Professionalism (Professional), and Innovation and Entrepreneurship.

As the academy proceeds with SLD, interprofessional education, collaboration with other schools and dissemination of scholarship related to SLD pedagogy, assessment, and program effectiveness are encouraged. Through diligence, deliberation, and creativity, SLD programs can be refined and expanded to more fully prepare student pharmacists to impact the practice challenges that await them.

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Appendix 1. Considerations for Student Leadership Development in Doctor of Pharmacy Curricula

This appendix may be used by curriculum committees, administrators, faculty members, and instructors as they seek to advance student leadership development (SLD). Student leadership development is defined here as an intentional, individualized effort to grow the ability of all student pharmacists to lead positive change with or without a title, which is delivered in a manner that encourages students' active engagement in leadership.

Building the Curricular Framework (or Model)

What elements of our school mission, vision, and goals should influence our SLD?

What specific leadership competencies will be ensured in our graduates?

In addition to leadership knowledge related competencies, which leadership skills will be emphasized?

How can we use these competencies to guide decisions related to the framework, content, and delivery of SLD?

Which leadership framework (model) will guide our SLD initiatives?

What is our plan for horizontally and vertically integrating SLD in our didactic and experiential curriculum, as well as co-curricular and extracurricular experiences?

What interprofessional opportunities might we develop or evolve for SLD?

Creating the Environment

How can we facilitate the development of leadership role models?

Is leadership development (LD) adequately addressed in our college/school mission, goals, and strategic plan?

How are we supporting and celebrating student, faculty member, and administrative leadership successes?

How are we emphasizing leadership with or without a leadership title?

How are we creating a culture that expects student leadership and fosters SLD?

How are we supporting faculty, administrator, and alumni continuing professional leadership development?

How can we embrace extracurricular SLD which reaches *all* students?

How are we recognizing and optimizing the role that student organizations play in leadership development, while also supporting and collaborating with student organizations to advance SLD?

How are we maximizing partnerships and collaborations with other schools in and outside of pharmacy education for LD opportunities?

How well are we financially and administratively supporting sustainable SLD opportunities for *all* students?

Curricular Considerations

How might our recruitment process help emphasize pharmacy leadership roles and responsibilities?

How might our admissions process incorporate leadership criteria?

How could the expectation of leadership and foundational leadership knowledge be strengthened within our orientation process?

Where is foundational leadership knowledge introduced in the curriculum?

How is SLD threaded through didactic courses and through experiential education?

What extracurricular and postgraduate LD opportunities can be explored and developed to further support SLD?

Teaching/Learning Methods

What SLD methods are already in use within our didactic and experiential curriculum?

How do we integrate and highlight active-learning strategies that reinforce SLD?

How might experiences from pharmacy or other disciplines aid us in designing SLD activities?

How can we facilitate student learning from other leaders?

How can we facilitate students' self-directed leadership development?

How can we help students examine and learn from their own leadership experiences?

Assessment Methods

How is SLD represented in the school student learning assessment plan?

How will each SLD competency be assessed?

Where might we embed assignments (eg, logs/journals, reports, reflections) that help us assess competency attainment and/or growth?

What assessments are available related to the leadership framework/model we're using in our program?

What measures help to build student self-awareness in leadership? What measures benefit our understanding of student development? Can some address both purposes?

Appendix 2. Examples of Leadership Development Competencies

Source	Description
Pharmacy Leadership Instructors[2]	Eleven competencies in three areas (Leadership Knowledge, Personal Leadership Commitment, and Leadership Skill Development) derived by a modified-Delphi process with specific consideration given to the competencies needed for entry level doctor of pharmacy graduates.
The Jossey-Bass Student Leadership Competencies Database[87]	Sixty competencies in eight areas derived from review of several leadership models and competencies from academic programs accredited by 72 programmatic accrediting organizations.
Goucher College[88]	Twenty-four leadership outcomes in six domains for a student leadership program at a small, secular liberal arts college with a liberal arts education mission and a study abroad requirement to meet humanitarian outcomes. The Goucher College outcomes are an example of a set of learning objectives tailored to the mission of an institution while retaining broader leadership principles.
Georgetown University Institute for Transformational Leadership[89]	Ten (10) leadership outcomes representative of outcomes that reflect a faith-based (Jesuit Catholic) university mission. Leadership development programs at faith-based institutions often have strong servant and/or personal-development themes, such as the Georgetown competency "Grow and expand as human beings even as they lead extraordinary outcomes for their communities and organizations."