Best Practices in Leadership Curriculum Development: A Case Study of a Curriculum Designed to Foster Authentic Leadership Skills in Graduate Students

Theresa M. Delbert
Chatham University

Karen Jacobs
Boston University

Evidence supports that leadership development programs effectively increase leadership skills. Best practice in leadership curriculum development based on empirical evidence from occupational therapy, business and management, and higher education disciplines will be introduced. A case study of an innovative curriculum developed based on these best practices, learning theories, and learning science principles will be described. The structured approach to construction and implementation of the leadership curriculum based on authentic leadership theory demonstrates one program's approach to the assessment of the impact and knowledge transfer among graduate occupational therapy students.

Keywords: authentic leadership, graduate students, leadership development, leadership curriculum design

INTRODUCTION

As the Harvard Business School has noted, although a majority of U.S. colleges and universities include leadership development as a goal and refer to leadership in the mission, there is a gap in the number of institutions that are actually measuring leadership and leadership development as an outcome. Therefore, leadership development impact is unknown (Avolio, 2010). Consistently, higher education institutions mention leadership in their mission and vision statements, indicating a large degree of importance and value. However, there is little in the way of practical application and understanding of how this leads to curriculum that can translate to impactful leadership outcomes.

In order to determine the methods used within and the effectiveness of established leadership curriculums and workshops, literature from occupational therapy, business and management, and higher education were investigated. Higher education was chosen in order to frame the curriculum in the context of the educational environment and identify the needs of the student population. Leadership development programs for healthcare students or healthcare practitioners were analyzed (Block & Manning, 2007; Blumenthal et al., 2014; Dunne et al., 2015; Lenihan et al., 2015; Rosenman et al., 2014; Walia & Marks-Maran, 2014), as well as leadership development programs for students in higher education in general (Blumenthal et al., 2014; Cosner, 2019; Grantham et al,, 2014; Haber-Curran & Stewart, 2015; Ladyshewsky & Taplin, 2014; Lenihan et al., 2015; Mansfield et al., 2010; Mukoza & Goodman, 2013;

Passarelli et al., 2018; Sandfort & Gerdes, 2017; Wiewiora & Kowalkiewicz, 2019). Within business disciplines and leadership literature, development and implementation of leadership curriculum has been presented in systematic reviews (Leskiw & Singh, 2007; Rosenman et al., 2014), a meta-analysis (Collins & Holton, 2004), and theory papers (Dunne et al., 2015; Lenihan et al., 2015). The importance of defining leadership was a common theme among literature from all disciplines. For instance, Haber-Curran & Stewart (2015) assessed the leadership skills of 651 first year undergraduate students in an honors seminar course pre-and post- a service-learning component. Students experienced a significant decrease in their leadership skills, though effect size was small. Results indicate how important it is to go through the process of defining and measuring the construct of leadership. The study used a task-oriented and leader-oriented theoretical framework, rather than a process-oriented and social change-focused framework which would have been more in line with service-learning literature.

Defining Leadership
Leadership can have many definitions. Winston and Patterson (2006) identified over 90 variables that may comprise the whole of leadership. Leadership exists at every level of an organization, not just at the highest levels, and leadership and leadership opportunities can be both formal and informal (McCauley & Lee, 2015). When leadership extends beyond positional hierarchy, job titles, and management; it is a process of social influence working towards communal achievement of a goal (Kruse, 2013). In order to influence others, leaders use interpersonal communication skills, including active listening and persuasive speech, in combination with robust critical thinking skills (Winston & Patterson, 2006). Leadership can be defined by the integration of common elements including an individual's vision, motivation, service, empathy, creativity, thoroughness, assertiveness, management style, team building skills, and risk-taking skills (Gamelearn, 2016).

LEADERSHIP DEVELOPMENT IN HIGHER EDUCATION

Leadership development in higher education has been addressed through interviews (Eich, 2008; Hendricks & Toth-Cohen, 2018), scoping reviews (Day et al., 2014; Dopson et al., 2019), theory papers (Holten et al., 2015; Kiersch & Peters, 2017), surveys (Allen, & Hartman, 2009; Jenkins, 2013; Posner, 2004), and longitudinal studies (Dungan & Komlves, 2007). Avolio & Luthans (2006) determined leadership intervention/education had a positive impact, regardless of the duration or type of leadership theory being applied. A meta-analysis from 2009 answered a directly related question: do leadership interventions have the intended impact and if so to what degree? (Avolio et al., 2009). The meta-analysis found that leadership training interventions indeed made a positive impact on the development of leadership skills. Further findings suggest that leadership can be developed through specific educational activities and by modeling and practicing leadership skills and competencies (Cummings et al., 2008). However, to be effective, leadership cannot be taught in just one course alone (Avolio et al., 2009), hence the need for leadership to be incorporated throughout the coursework in an entire curriculum (Avolio et al., 2009).

Best Practice in Leadership Curriculum Development
Certain best practices surface regarding instructional methods and program design for leadership training programs or leadership curricula within higher education broadly. Empirical research, including two comprehensive meta-analyses, also exist regarding the effectiveness of leadership training programs (Burke & Day, 1986; Collins & Holton, 2004). Best practices include: 1. defining leadership, 2. employing specific methods of instruction for leadership, 3. practicing sustainability in leadership training, 4. developing the content in leadership development programs, and 5. evaluating leadership programs. Each area of best practice will be described further within the context of higher education.

Best Practice in Defining Leadership
Leskiw and Singh (2007), conducted a systematic review of leadership development programs and determined that best practice for program creation and implementation involves the leadership training

program being a part of the business strategy, rather than being put together or incorporated in an ad hoc manner. Within education, this would indicate a link to the programmatic outcomes and the mission and vision of the academic program. Through this process, an organization should define leadership and leadership attributes and develop a clear understanding how the defined leadership principles can be applied to the leadership development practices and programs (Leskiw & Singh, 2007).

Leadership attributes and competences can include generating or realizing a vision, courageous risk taking, change agency or adaptability, communication and advocacy, decision making, team building, and ethical behavior or integrity (Rottmann et al., 2016). Best practices can be applied with linking student attributes at the programmatic level, essentially a process of defining the "ideal student" with respect to leadership competencies and attributes that a student should have by the end of the program. This can be done as part of the needs assessment process, which has been identified as a best practice for leadership development programs (Leskiw & Singh, 2007). Ensuring this alignment in the curriculum can lead to education that has the potential to benefit not only students, but other stakeholders including professional organizations and the public (Rottmann et al., 2016). Incorporating leadership outcomes in every class within a curriculum is one way to ensure the leadership training is neither created in a vacuum nor taught in isolation from other course content, pitfalls noted by Melum (2002). In line with this integrated view of leadership is the notion that leadership needs to be a part of the culture of the organization and one person alone should not be the sole responsible party for developing leaders (Leskiw & Singh, 2007). Incorporating leadership learning objectives in every course allows the leadership curriculum to reach all students in all topics. Leadership literature suggests that leadership is needed at all levels of an organization, not just at the high management levels (Day, 2011). This notion supports a program's decision to include all students as the audience of the leadership development curriculum rather than just a select few high performing students (De Lay, 2010).

Best Practice in Methods of Instruction

Leadership scholars agree that "leadership involves a range of behavioral, cognitive, and social skills that may be developed through different learning modes and at different rates" (Leskiw & Singh, 2007, p. 454). As such, an array of instructional strategies can be used to engage students in leadership development education or training programs and to assess student development as a leader (Rottmann et al., 2016). Instructional strategies used in leadership development education or training include: action-based learning and solving real life problems through action learning (Giber et al., 2000; Hernez-Broome & Hughes, 2004; Leskiw & Singh, 2007; Lester, 2015); service learning (Lester, 2015; Scott & Tolar, 2009; White, 2017); problem-based learning within diverse team (Lachance & Oxendine, 2015); interdisciplinary case studies or scenarios (Getha-Taylor, et al., 2015; Lachance & Oxendine, 2015); group discussions (Getha-Taylor et al., 2015); experiential learning (Leskiw & Singh, 2007; Rottmann et al., 2016); capstone projects (Scott & Tolar, 2009); simulations (Leskiw & Singh, 2007; Zenger & Folkman, 2003); mentoring (Jardine et al., 2015; Leskiw & Singh, 2007; Marcus, 2004; Thach, 2002); didactical instruction of leadership skills and traits (Getha-Taylor et al., 2015); multimedia presentations (Getha-Taylor et al., 2015); guest lecture from current leader (Lester, 2015) or individual on non-traditional career trajectory (Rottmann et al., 2016); 360-degree performance feedback system (Alldredge et al., 2003; Thach, 2002); self-assessment (Getha-Taylor et al., 2015); and competency based curriculums (Reed, et al., 2016).

Conger (1992) proposed a theoretical framework that comprised four primary approaches to leadership development including: personal growth, conceptual understanding, feedback, and skill building. According to Conger (1992), aspects of all leadership development programs fall into one of the four categories. Indeed, an exercise of categorizing all of the aforementioned methods of instruction according to Conger's framework could be completed. Conger (1992) found skill building to be the most commonly used category, but there is no hierarchy among the four categories related to resulting outcomes. This theoretical framework may prove useful when designing a leadership curriculum to ensure that each broad approach to leadership development is covered through specific methods of instruction.

Allen and Hartman (2009) identified 40 sources of learning commonly used in leadership development programming for college students and categorized each source within Conger's four approaches to

leadership development. The top 20 most commonly used sources of learning were then sorted into Conger's four approaches and studied by Allen and Hartman (2009). The researchers sought to determine student perception on how they would like to learn about leadership. Students preferred activities that addressed personal growth and skill building and seemed to appreciate opportunities for personal growth vs. group-oriented activities (Allen & Hartman, 2009). Figure 1 displays the 20 sources of learning identified by Allen and Hartman (2009) as commonly found in collegiate leadership development programs categorized within each of Conger's four approaches.

TABLE 1
CONGER'S FOUR APPROACHES TO LEADERSHIP DEVELOPMENT, WITH SOURCES OF LEARNING

Personal Growth	Conceptual Understanding
	Case studies
Journal reflections	Film and TV clips
Small group reflection	Lecture
Personal vision statements	Panel of experts
Service learning	Attend a tour
Informal networking	Listen to a story
	Observation
	Articles or books
	Research leadership
Feedback	**Skill Building**
Assessments and instruments	Low ropes or team course
	Icebreakers
	Simulations or games
	Role-playing activities

Note. *Adapted from "Sources of learning in student development programming," by S.A. Allen & N. Hartman, 2009, Journal of Leadership Studies, 3(3), p. 8. doi: 10.1002/jls.20119*

Based on the systematic review of best practices, Leskiw and Singh (2007) found that leadership development should consist of formal training and education, as well as action-learning activities that focus on application. Connecting students with real-life problems has been suggested in the evidence literature as one way to engage in leadership development. This may involve "instructors in a range of higher education fields [. . .] supplementing technical, theoretical, and clinical training with professionally relevant leadership education based on the workplace realities of their alumni" (Rottmann et al., 2016, p. 166). Experiential learning or action learning is an important complement to traditional classroom training (Leskiw & Singh, 2007) as these active learning pedagogies allow for enduring and transformative learning to occur. This strategy can also be applied to content assessment, as traditional assessments such as lectures, quizzes, and exams were found to be less effective at developing student leadership than transformational techniques, such as reflective journals, collaborative projects, and group decision making (Cress et al., 2010).

This mix of didactic classroom learning, experiential learning, and mentorship is in line with the teaching activities identified as valuable from the student perspective (Lachance & Oxendine, 2015). Lachance and Oxendine (2015) surveyed students in a Leadership Fellows program in a graduate level Public Health program and found students ranked the top five most valuable components of the leadership program as: 1. 360-degree assessments, 2. class sessions, 3. consulting projects and teamwork, 4. field trips with health leaders, 5. one-on-one meetings with faculty. Ultimately, "leadership educators and students will benefit from experientially based, contextually relevant curricula, while professional societies will benefit from the expanding influence of members who not only learn how to lead in their chosen discipline but also accept leadership responsibilities in their respective workplaces" (Rottmann et al., 2016, p. 166).

Best Practice for Suitability in Leadership Training

For leadership training to be sustainable, the learner must incorporate leadership as part of their identity; and training should be developmental in nature, signifying a change from novice to intermediate to advanced (Lord & Hall, 2005). Currently, best practice does not exist between the use of online vs. on ground methods for completing this developmental training (Leskiw & Singh, 2007). However, a hybrid or blended approach has been suggested that would combine classroom instruction, online content delivery, coaching or mentoring, and experiential learning components allowing application of new knowledge or skills (Zenger & Folkman, 2003).

Another aspect of sustainability of leadership training programs is related to institutional support and faculty preparedness for leading the leadership trainings. Faculty should have the opportunity for leadership development (Reed et al., 2016; Scott & Talor, 2009), which again speaks to the notion that leadership needs to be a part of organizational culture (Leskiw & Singh, 2007; Scott & Talor, 2009) and the responsibility for developing leaders should not fall only to one person (Leskiw & Singh, 2007). Similar to leadership training students, the training provided for faculty can occur in a variety of formats including workshops, expert panel discussion, small and large group activities, formal and informal group discussions, multimedia presentations, case studies, and self-assessments (Scott & Talor, 2009).

Best Practice for Content in Leadership Development Programs

Content covered in leadership curriculum can include traditional leadership theory and developmental topics such as leadership styles (Getha-Taylor et al., 2015; Reed et al., 2016; Schuhmann, 2010); leadership skill sets such as conflict management and coaching (Getha-Taylor et al., 2015; Lachance & Oxendine, 2015); and leadership priorities such as collaboration and managing change (Getha-Taylor et al., 2015; Reed et al., 2016; Schuhmann, 2010). Some researchers categorize the skillsets into conceptual leadership skills which improve decision making and strategic thinking (Getha-Taylor et al., 2015; Lachance & Oxendine, 2015; Pernick, 2001; Yukl & Mahsud, 2010); and interpersonal leadership skills which deal with communication and working with others (Getha-Taylor et al., 2015; Katz, 1974; Lachance & Oxendine, 2015; White, 2017).

Broadly speaking, initiatives to develop leadership should be "practice based, process focused, interdisciplinary, diversity based, adaptive, experimental, innovative, and empowering, and they should encourage authenticity" and should focus on helping students lead from where they are (Lachance & Oxendine, 2015, p. S60). Infusing leadership principles into the technical content in the curriculum has been discussed within higher education (De Lay, 2010) and has been found to be most impactful when linked to disciplinary skills and concepts that are already being taught in courses (Reed et al., 2016). One model focuses on leadership development in formal classroom education early in the curriculum increasingly moving towards experiential learning activities (Farr & Brazil, 2009), while another model incorporates classroom learning and experiential learning throughout the whole curriculum (Knight & Novoselich, 2017), and still another model offers activities at various levels throughout the curriculum to engage students at their specific point of interest (Lachance & Oxendine, 2015). Specific learning activities that can supplement technical content and assist in meeting this recommendation can occur as co-curricular activities or classroom experiences (Carter et al., 2016; Schuhmann, 2010) and include: StrengthFinder 2.0 (De Lay, 2010); student mentorship by faculty (Ghimire & Martin, 2008); mentors assisting in finding leadership opportunities for mentees (Eliades et al., 2017); student membership in discipline specific national or state association (Lapidus-Graham, 2012); increasing frequency of faculty and student interactions (De Lay, 2010); use of media tools such as digital storytelling (Lachance & Oxendine, 2015); utilization of leadership and management competency checklist (Grossman, 2007); identification of stretch assignments (Eliades et al., 2017); teaching professional skills education (professionalism, being on time, meeting deadlines, etc.) (Knight & Novoselich, 2017); and use of student centered teaching, peer instruction, and group learning (Knight & Novoselich, 2017).

Best Practice in Evaluation of Leadership Programs

A plan for evaluation designed prior to implementation of a leadership training program can provide information about the training's learning outcomes, results, and effectiveness (Kirkpatrick & Kirkpatrick, 2006). Kirkpatrick and Kirkpatrick (2006) developed an evaluation framework that includes four levels of examination: reaction, learning, behavior, and results. This framework provides immediate results and feedback, as well as longer-term results of impact and has been widely used within leadership development programs in a variety of contexts from industry to academia (Getha-Taylor et al., 2015; Leskiw & Singh, 2007; Lin et al., 2011; Praslova, 2010). Whether or not Kirkpatrick and Kirkpatrick's specific framework is used, principles of best practice can be found and utilized by any leadership training. Evaluation best practice includes assessing for both short-and long-term results (Kirkpatrick & Kirkpatrick, 2006), and using multiple evaluation methods in order to increase validity of results (Kirkpatrick & Kirkpatrick, 2006; Leskiw & Singh, 2007).

Evaluation can include both direct and indirect assessment methods. Direct assessment methods include rubrics for assignments that assess competency at developmental levels from novice to master (Reed et al., 2016), and a leadership instrument administered at three set times over the period of leadership training (Getha-Taylor et al., 2015; Reed et al., 2016). Indirect assessment methods include administering satisfaction surveys for current students and alumni, and tracking students' enrollment outcomes (Reed et al., 2016).

In terms of administration timing, surveys have been completed pre- and post-leadership training (Haber-Curran & Stewart, 2015), only post- leadership training (Lachance & Oxendine, 2015), and as repeated measures during interval scheduling throughout leadership training (Getha-Taylor et al, 2015). Kirkpatrick and Kirkpatrick (2002) recommend surveying at minimum before and after the leadership training, as this allows time for any changes to occur. Jardine et al. (2015) identify leadership skills as developmental indicating a need to assess over time; which supports the design of Getha-Taylor et al. (2015) who assessed student leadership skills at three points (beginning, middle and end) in the leadership training and Reed et al. (2016) who assessed students at three points (Freshman year, Sophomore year, and Senior year) within a four-year curriculum.

Conclusion from Best Practices in Leadership Development Programs

Knight & Novoselich (2017) note that even in academic programs that indicate student leadership development as a programmatic learning outcome or specifically highlight it as a goal, there is disagreement on how to develop the leadership skills in students. This discrepancy demonstrates the need and importance of having evidence-based curricular practices for leadership development. Leadership, as it's defined by the academic program, should align with the programmatic outcomes, mission and vision. Once leadership is defined, the process of pairing curriculum design with methods of evaluation can begin. Literature exists that discusses the differences within and between leadership programs, and current best practices for broad instructional methods and specific learning activities can be identified and categorized using Conger's (1992) theoretical framework.

CASE STUDY: LEADERSHIP CURRICULUM DEVELOPMENT IN AN OCCUPATIONAL THERAPY PROGRAM

While the Doctor of Occupational Therapy (OTD) degree is distinctively characterized by clinical leadership (O'Brien et al., 2012; Pierce & Peyton, 1999); there is a limited amount of literature regarding evidence-based, theory-driven, outcome-oriented curricular practices that develop leadership skills in entry-level Doctor of Occupational Therapy (EL-OTD) students. The occupational therapy (OT) profession would benefit from OT programs taking an empirical approach to implementing leadership development as there is currently a need to understand which educational approaches produce the most impactful and relevant changes for the profession.

The following is a case study of an occupational therapy (OT) program at Chatham University that developed a leadership curriculum based on Authentic Leadership Theory and applied each of the best

practices in leadership curriculum development. Curriculum development involved the infusion of authentic leadership components in a leadership curriculum nested into an EL-OTD curriculum. Specifically, this initiative consisted of the inclusion of course learning objectives and course activities focused on the components of authentic leadership theory framework within each course in the OT program's curriculum.

Defining Leadership
Authentic Leadership Theory
    Authentic leadership is a leadership theory based in positive psychology (Avolio & Gardner, 2005) that has components of ethics and positive organizational behavior (Walumbwa et al., 2008). Influenced by self-determination theory (SDT) (Deci & Ryan, 2000) and authenticity (Kernis, 2003), the authentic leadership theory attempts to explain that actions and behaviors must be in alignment with one's internal values and beliefs in order to be authentic. Within SDT, Deci and Ryan (2000) relate authenticity to self-regulation. Kernis drew from SDT in his research on authenticity. Kernis (2003), described authenticity as a developmental concept and when authenticity is achieved, one reaches the ideal levels of self-esteem. Within this context, authenticity involves understanding one's character, beliefs, values, strengths, and weaknesses. In practice, the application of authentic leadership theory results in a leader who engages in positive self-development so that their personality and core values align with their behaviors, wherein they are acting in accordance with their true self (Walumbwa et al., 2008). The authentic leader is honest, ethical, and practical (George, 2003). Authentic leaders are defined as having self-awareness of their own thoughts, values, perceptions, strengths, and actions. Authentic leaders are also cognizant of the strengths and values of other individuals around them and have an appreciation for and understanding of the context within which they operate. Generally, authentic leaders have confidence and resilience and demonstrate ethical behavior and a moral character (Avolio et al., 2004).
    Authentic leadership theory consists of four components which can be developed in leaders: self-awareness, balanced processing, an internalized moral perspective, and relational transparency (Walumbwa et al., 2008). The four components are listed in Table 1.

TABLE 2
THE FOUR COMPONENTS OF AUTHENTIC LEADERSHIP

The Four Components of Authentic Leadership	
Self-awareness	Personal insights of the leader, understanding of one's strengths and weaknesses; also understanding how one interacts with and impacts others; not an end, but a process
Internalized Moral Processing	Individuals are not influenced by outside pressures and use their morals to guide decisions/behavior; defined by ethical behavior
Balanced Processing	Part of self-regulation, it includes remaining unbiased and processing information objectively; an individual will seek input from others before making a decision
Relational Transparency	Another part of self-regulation, it involves presenting one's true self to others in an appropriate manner

    The components of authentic leadership align with the leadership skills that evidence literature and employers both identify as being necessary, in-demand skills for occupational therapy practitioners. Within the healthcare environment, authentic leadership has had many positive effects such as enhancing thriving at work (Mortier et al., 2016), reducing burn-out (Spence et al., 2015; Spence et al., 2014), predicting optimism and trust (Stander et al., 2015), enhancing and promoting interprofessional collaboration (Regan et al., 2016; Spence et al., 2013), and being positively linked to employee creativity (Malik et al, 2016). Authentic leaders act morally and ethically and understand their beliefs, values, strengths and weaknesses.

They know who they are and what they think, and others see them in this way as well. Authentic leaders understand the environment and context they are working in, and they are aware of the values and strengths of those around them. (Avolio et al., 2004).

As a result of the authentic leadership core components of self-awareness and self-regulation, authentic leaders have the ability to reflect on themselves and to be true to themselves (Chan et al., 2005). Ultimately, when completed accurately and thoroughly, reflective practice can become a powerful way for practitioners to evaluate and change their practice (Thanaraj, 2016). Higher level skill-sets, such as complex decision making, critical thinking and problem solving, are related to being a reflective practitioner and are important for advanced level practice within occupational therapy settings. Occupational therapists must be able to make quick decisions and meet the demands of an ever changing, unpredictable environment (Parham, 1987; Royeen, 1995). With this in mind, reflective practice is a high-level skill that guides the way occupational therapists think and engage in clinical reasoning (Bannigan & Moores, 2009). With an array of research that highlights the paramount importance and value of clinical reasoning skills within occupational therapy practice (Schell & Cervero, 1993; Cohn, 1989; Crepeau, 1991); this notion of reflective practice becomes all the more important. Atkins & Murphy (1993) (as cited in Bannigan & Moores, 2009) assert that in order to become a reflective practitioner, occupational therapists must focus on developing and improving self-awareness and the skills to critically reflect on and evaluate themselves. The principles of authentic leadership can be used as a means for developing and increasing these reflective practice skills, which will benefit entry-level OTD students as they prepare to enter practice.

Baron (2016) found that authentic leadership can be fostered through education and reflection. Therefore, with this understanding in mind, along with the connection between authentic leadership components and leadership skills important for OTs, this leadership theory was chosen by Chatham University to provide a definition for leadership and to drive the creation of the proposed EL-OTD leadership curriculum.

Methods of Instruction

Within each semester, a course learning outcome is included in each course related to the Authentic Leadership component (Appendix A). A learning activity and/or assignment connected to each course learning outcome was developed. Each course instructor is responsible for ensuring alignment of course content with the intended leadership course outcome, implementing the leadership learning activity, and evaluating the activity. Consistent with Conger's Four Approaches to Leadership Development, various learning formats will be used to support leadership development, including: traditional lecture, group assignments, individual assignments, assigned readings, peer feedback, instructor feedback, self-reflection, role-playing, scenario or case-based learning, use of multimedia, and discussion within Leadership Advising Groups (Appendix B). An evaluation method for learning assignments, such as a rubric assessing completion of work, was also developed. Each course instructor may choose the assignments that are factored into the overall course grade.

Conger's Four Approaches mapped with learning activities to be used in the leadership development component of the curriculum will serve as the objectives; while the Teaching and Learning Model for Leadership accounts for *how* these objectives interact and result in learning/change in behavior, and ideally an increase in leadership skills. This model for effective leadership teaching and learning developed by Holten et al. (2015) serves as a sound and relevant theoretical basis for the learning process intended to occur as a result of the leadership development infused into OT curriculum. The model was inspired by several learning principles: continued learning, deep learning, time-on-task, out-of-class learning, experiential learning, action learning and learning by proxy (Holten et al., 2015). The model is based on the premise that from the core biological perspective, learning requires the following: training, practice, and feedback. Therefore, for learning to occur, these three elements (training, practice, and feedback) must be present in the learning environment (Holten et al., 2015). A visual representation of the model is presented in Figure 2.

FIGURE 1
TEACHING AND LEARNING MODEL FOR LEADERSHIP
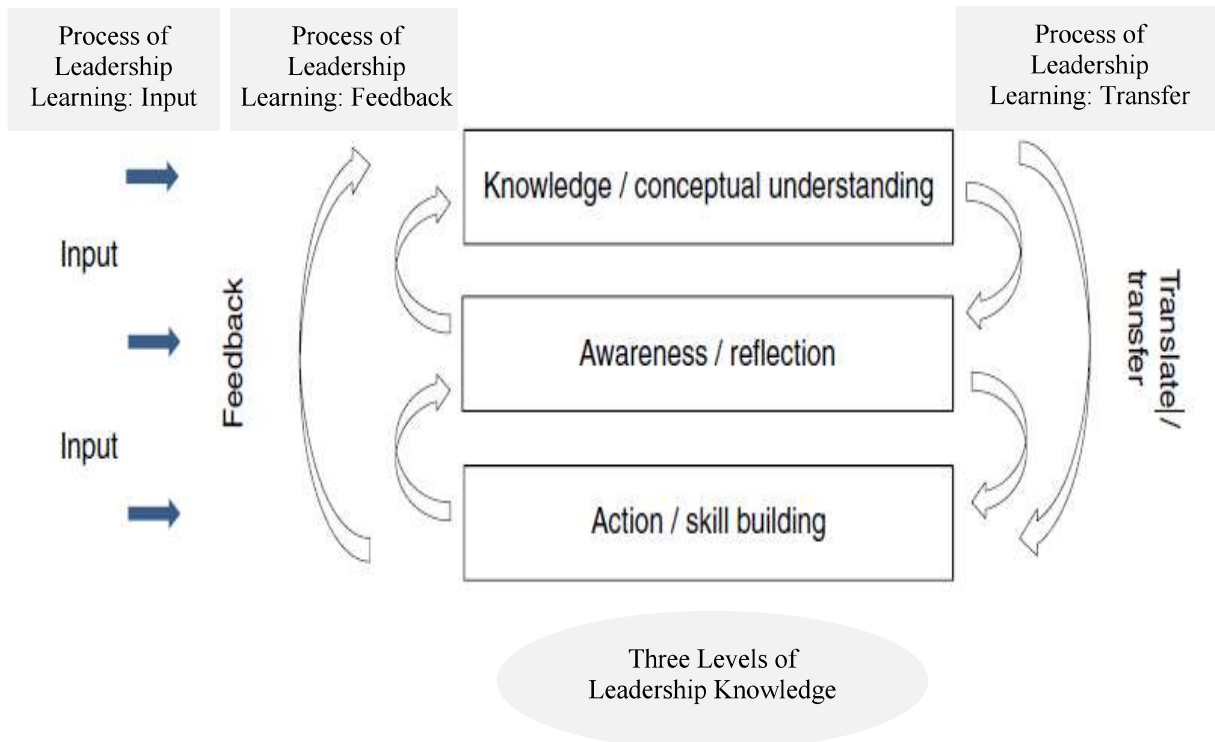
Note. Adapted from "Leadership in a Changing World: Developing Managers Through a Teaching and Learning Programme," by A.L. Holten, A. Bollingtoft, and I. Wilms, 2015, Management Decision, 53(5), p. 1111. Copyright 2015 by Emerald Insight.

Figure 2 illustrates the three levels of leadership knowledge and three processes of leadership learning which account for the circular process of leadership development. According to Holten et al. (2015), the model "comprises iterative transfer and feedback processes, providing learning that is conceptual, reflective, and skill building" (p. 1108); and ultimately, learning is not linear, but rather is agile and alternating between the various levels and learning processes. The three levels of leadership knowledge include knowledge/conceptual understanding, awareness/reflection, and action/skill building. The three processes of leadership learning include input, transfer, and feedback. Input, involving the introduction of new knowledge, happens at all three levels of leadership knowledge, hence the three blue arrows in Figure 2 pointing to each level. Input supports new conceptual understandings of leadership and provides contextual background for integrating past experiences with the new knowledge. Transfer, represented by the curved arrows between levels, refers to learning that is applied or translated from one level to another in the model, or from one context to another in real life. Specifically transfer occurs through planned activities that address practice of and reflection on transferring skills to various contexts. Feedback, like input, occurs at each level of leadership knowledge. Feedback allows for behavior change, skill development, and formation of new habits (Holten et al., 2015). Ideally, feedback should come from multiple sources and include feedback from self, feedback from others, and feedback from learning activities. Findings from a single or repeated assessment at various time points during a training program can be a form of feedback.

The model was established as a holistic approach to supporting the individual learning process and the development of adaptable leadership skills, such as communication and vision building, while also taking into account the transfer of this learning from a classroom to a work context (Holten et al., 2015). The focus on these broad leadership skills and strategies was purposefully chosen in order to avoid a specialized

program designed based on current fads (Holten et al., 2015). While there is empirical evidence indicating leadership can be taught and learned (Bass & Riggio, 2006; Parry & Sinha, 2005); Holten et al. (2015) describe that within leadership development, a change in habit or behavior as well as an increase in knowledge or skills is required. The authors acknowledge an identified weakness of other leadership training models is a focus on teaching about leading vs. teaching how to lead. Therefore, within this model an emphasis is placed on two components: the theoretical knowledge of leadership and skill building element of leadership.

When applied within the OT leadership curriculum, the Teaching and Learning Model and Conger's Four Approaches to Leadership Development represent *how* the curriculum plans to increase student leadership skills. The leadership development includes a focus on one component of Authentic Leadership per semester. With four components of Authentic Leadership and eight semesters within the EL-OTD curriculum, each component becomes the focus of two semesters. The first and last semester will focus on self-awareness. The second and third semester will focus on relational transparency. The fourth and fifth semester will focus on internalized moral perspective and the sixth and seventh semester will focus on balanced processing. The four components of Authentic Leadership will be introduced sequentially so that students have the opportunity to develop basic self-awareness and self-regulation skills prior to incorporating the skills into their overall decision making and communication methods. This structured method for leadership development is consistent with the scaffolded approach to the overall curriculum design. The skills students acquire in years one and two will be incorporated as a whole in year three.

Sustainability in Leadership Training

Sustainability relates both to the program itself and to the support provided to the individuals leading the leadership trainings. To ensure that the responsibility for developing leaders should not fall only to one person (Leskiw & Singh, 2007), all faculty are responsible for incorporating one learning objective and one learning activity related to the leadership component within their course each semester. In order to account for leadership within the organizational culture of the OT program, the six full-time EL-OTD faculty began engaging in the same leadership activities as students which included group activities, formal and informal group discussions, working through case studies and self-assessment, and attending workshops together.

Developing Content

The structured approach to construction and implementation of the leadership curriculum was based on Systems Theory and also relied heavily on Leadership Development Theory, Conger's Four Approaches to Leadership Development, and Authentic Leadership Theory. Grounding the leadership curriculum in Systems Theory, a theory involving the development of broad principles that can be applied to a system as a whole and all of its parts (Hammond, 2003), enables an applicability and relevance for other disciplines and institutions. Application of Systems Theory also allows for the program to become the architect of leadership development that is germane to its mission and programmatic goals.

Content includes classroom and co-curricular activities that cover individual assignments and reflections, as well as group-based activities that are both specific to OT and inclusive of an interdisciplinary team. Students have opportunities to practice and apply the content they are learning in courses through fieldwork placements and experiential learning activities. Students are assigned a faculty leadership advisor, one of the six full-time faculty members, to meet with individually each semester. The faculty member can then guide and provide feedback on the leadership development process. Students complete an individual professional behavior assessment and contribute to a leadership portfolio each semester in order to individually process and reflect on their growth as leaders. They also engage in group leadership meetings as a way to collectively process and give/receive feedback with peers.

Evaluating Leadership Curriculum

In order to truly assess change, Kirkpatrick and Kirkpatrick (2002) recommend surveying at minimum before and after the leadership training. The evaluation plan for the OT leadership curriculum includes using the Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) to assess student leadership
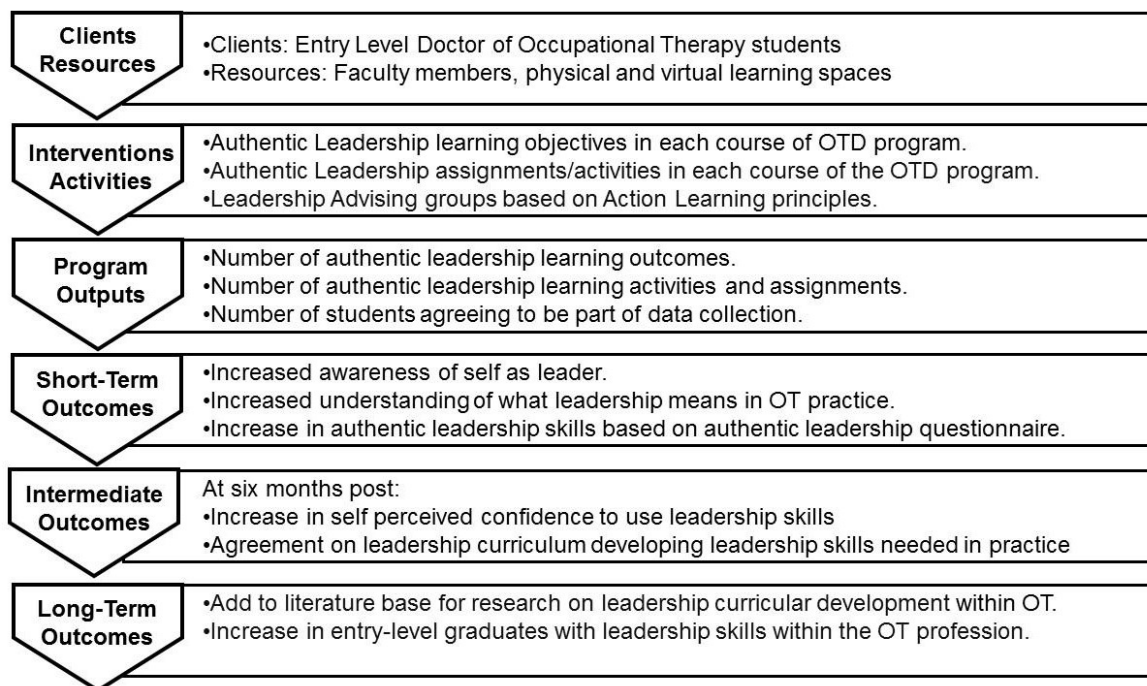
skills at four points throughout a 3-year curriculum. Evaluation best practice also includes assessing for both short-and long-term results (Kirkpatrick & Kirkpatrick, 2006). Short term outcomes for the students partaking in the leadership development include demonstrating: 1. Increased awareness of themselves as a leader; 2. Increased understanding of what leadership means in OT practice; and 3. Increased leadership skills as assessed by ALQ. Learning skills in the leadership domain are a lifelong endeavor and therefore, mastery is not the goal. Rather, the EL-OTD program intends to foster as much growth as possible in each leadership component as it relates to a student's personal and professional authenticity and identity. Long term outcomes for the students include: 1. An increase in self-perceived confidence to use leadership skills as indicated on alumni survey 6 months' post-graduation; and 2. Agreement on relevance/value of leadership curriculum in preparation for utilizing leadership skills in entry level practice.

Logic Model for Use with Stakeholders

The logic model is a visual representation of the intended program that denotes outcomes based on program resources, activities and outputs (Newcomer et al., 2015). Figure 3 presents a simplified logic model for the leadership component of the EL-OTD curriculum. The logic model provides stakeholders with information about expected outcomes and program performance, which helps establish the program's qualifications for addressing the identified problem or need (Newcomer et al., 2015). The relationship between the resources, activities and the intended outcomes is represented as it relates to the specific goal of the program (Hayes et al., 2011).

Within this leadership curriculum, resources include faculty members, and the physical and virtual learning spaces where the instruction will take place. Understanding the available resources relates to project management, impacting strategic planning prior to program delivery and the intended performance measurement throughout the program delivery (Hayes et al., 2011). The intended outcomes, or desired results, are presented in terms of short-term, intermediate, and long-term classifications. Short-term outcomes will be assessed at the end of the initial program launch, intermediate outcomes at six months' post completion, and long-term outcomes at one-year post completion.

FIGURE 2
COMPONENTS OF AUTHENTIC LEADERSHIP TAUGHT IN THE EL-OTD

Clients Resources	•Clients: Entry Level Doctor of Occupational Therapy students •Resources: Faculty members, physical and virtual learning spaces
Interventions Activities	•Authentic Leadership learning objectives in each course of OTD program. •Authentic Leadership assignments/activities in each course of the OTD program. •Leadership Advising groups based on Action Learning principles.
Program Outputs	•Number of authentic leadership learning outcomes. •Number of authentic leadership learning activities and assignments. •Number of students agreeing to be part of data collection.
Short-Term Outcomes	•Increased awareness of self as leader. •Increased understanding of what leadership means in OT practice. •Increase in authentic leadership skills based on authentic leadership questionnaire.
Intermediate Outcomes	At six months post: •Increase in self perceived confidence to use leadership skills •Agreement on leadership curriculum developing leadership skills needed in practice
Long-Term Outcomes	•Add to literature base for research on leadership curricular development within OT. •Increase in entry-level graduates with leadership skills within the OT profession.

A mixed method, quasi-experimental single-group research design is being utilized with multiple sequential measurements pre-and post- implementation of the leadership curriculum. Data will be collected at the beginning of the program, while it is in progress, and following program completion. Program evaluation will include both formative evaluation of the leadership component of the curriculum, which is the independent variable, and summative evaluation of the student leadership skills, which comprise the dependent variables. The formative evaluation of program outputs, student satisfaction with the leadership component of the curriculum, and student satisfaction with their leadership advisor will serve as a means for program assessment. These key performance indicators within the program evaluation process will be of specific interest to the EL-OTD program, as well as the Dean and University administration when determining the satisfaction with, and effectiveness and efficiency of the leadership component of the curriculum.

CONCLUSION

After an extensive review of literature in occupational therapy, psychology, education, business, human resource development, leadership and management, coaching, and other related fields, specific themes emerged that represented best practice for creating leadership development programs. These best practices include: 1. defining leadership specific to the program; 2. employing specific and varied methods of instruction for leadership within the program; 3. practicing sustainability in leadership training so leadership can be a skillset transferred into practice; 4. developing leadership curriculum content that allows for personal growth, conceptual understanding, feedback, and skill building; and 5. evaluating the leadership program to determine its impact on leadership as a programmatic outcome. Broadly speaking, initiatives to develop leadership should encourage authenticity and be interdisciplinary, focused on diversity, adaptive to meet the needs of current and future practice, innovative, and empowering (Lachance & Oxendine, 2015). Leadership development programs should focus on helping individuals lead from where they are.

ACKNOWLEDGEMENTS

REFERENCES

Alldredge, M., Johnson, C., Stoltzfus, J., & Vicere, A. (2003). Leadership development at 3m: New process, new techniques, new growth. *Human Resource Planning, 26*(3), 45.

Allen, S.J., & Hartman, N.S. (2009). Sources of learning in student leadership development programming. *Journal of Leadership Studies, 3*(3), 6–16.

Avolio, B.J. (2010). Pursuing authentic leadership development. In N. Nohria & R. Khurana (Eds.), *Handbook of leadership theory and practice: A Harvard Business School centennial colloquium on advancing leadership* (739–768). Harvard Business Press.

Avolio, B.J., & Gardner, W.L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*(3), 315–338.

Avolio, B.J., Reichard, R.J., Hannah, S.T., Walumbwa, F.O., & Chan, A. (2009). A meta-analytic review of leadership impact research: Experimental and quasi-experimental studies. *Leadership Quarterly, 20*(5), 764–784. https://doi.org/10.1016/j.leaqua.2009.06.006

Avolio, B.J., Luthans, F., & Walumba, F.O. (2004). *Authentic leadership: Theory building for veritable sustained performance.* Gallup Leadership Institute, University of Nebraska-Lincoln.

Bannigan, K., & Moores, A. (2009). A model of professional thinking: Integrating reflective practice and evidence based practice. *Canadian Journal of Occupational Therapy, 76*(5), 342–350.

Baron, L. (2016). Authentic leadership and mindfulness development through action learning. *Journal of Managerial Psychology, 31*(1), 296–311. https://doi.org/10.1108/JMP-04-2014-0135

Block, L.A., & Manning, L.J. (2007). A systemic approach to developing frontline leaders in healthcare. *Leadership in Health Services.*

Blumenthal, D.M., Bernard, K., Fraser, T.N., Bohnen, J., Zeidman, J., & Stone, V.E. (2014). Implementing a pilot leadership course for internal medicine residents: Design considerations, participant impressions, and lessons learned. *BMC Medical Education, 14*(1), 257.

Burke, M.J., & Day, R.R. (1986). A cumulative study of the effectiveness of managerial training. *Journal of Applied Psychology, 71*(2), 232.

Carter, D.F., Ro, H.K., Alcott, B., & Lattuca, L.R. (2016). Co-curricular connections: The role of undergraduate research experiences in promoting engineering students' communication, teamwork, and leadership skills. *Research in Higher Education, 57*(3), 363–393.

Chan, A., Hannah, S.T., & Gardner, W.L. (2005). Veritable authentic leadership: Emergence, functioning, and impacts. In W.L. Gardner, J. Avolio & F. Walumbwa (Eds.), *Authentic leadership theory and practice: Origins, effects and development* (Vol. 3, pp. 3–41). Oxford, UK: Elsevier Ltd.

Cohn, E.S. (1989). Fieldwork education: Shaping a foundation for clinical reasoning. *American Journal of Occupational Therapy, 43*, 240–244.

Collins, D.B., & Holton, E.F., III. (2004). The effectiveness of managerial leadership development programs: A meta-analysis of studies from 1982 to 2001. *Human Resource Development Quarterly, 15*(2), 217–248. https://doi.org/10.1002/hrdq.1099

Conger, J. (1992). *Learning to lead: The art of transforming managers into leaders.* Jossey-Bass.

Cosner, S. (2019). What Makes a Leadership Preparation Program Exemplary? *Journal of Research on Leadership Education, 14*(1), 98–115.

Crepeau, E.B. (1991). Achieving intersubjective understanding: Examples from an occupational therapy treatment session. *American Journal Occupational Therapy, 45*, 1016–1025.

Cress, C.M., Astin, H.S., Zimmerman-Oster, K., & Burkhardt, J.C. (2001). Developmental outcomes of college students' involvement in leadership activities. *Journal of College Student Development, 42*(1), 15–27.

Cummings, G., Lee, H., MacGregor, T., Davey, M., Wong, C., Paul, L., & Stafford, E. (2008). Factors contributing to nursing leadership: A systematic review. *Journal of Health Services Research & Policy, 13*(4), 240–248.

Day, D.V. (2011). Leadership development. *The SAGE handbook of leadership, 22*, 37–50.

Deci, E.L., & Ryan, R.M. (2000). "What" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227–268.

De Lay, A.M. (2010). Wanted: Leadership for all!. *The Agricultural Education Magazine, 83*(2), 9.

Dopson, S., Ferlie, E., McGivern, G., Fischer, M.D., Mitra, M., Ledger, J., & Behrens, S. (2019). Leadership development in Higher Education: A literature review and implications for programme redesign. *Higher Education Quarterly, 73*(2), 218–234.

Dugan, J.P., & Komlves, S.R. (2007). *Developing leadership capacity in college students.* College Park, MD: National Clearinghouse for Leadership Programs.

Dunne, S., Lunn, C., Kirwan, M., Matthews, A., & Condell, S. (2015). Planning and selecting evaluation designs for leadership training: A toolkit for nurse managers and educators. *Journal of Professional Nursing, 31*(6), 475–481.

Eich, D. (2008). A grounded theory of high-quality leadership programs: Perspectives from student leadership development programs in higher education. *Journal of Leadership & Organizational Studies, 15*(2), 176–187.

Eliades, A.B., Jakubik, L.D., Weese, M.M., & Huth, J.J. (2017). Mentoring practice and mentoring benefit 6: Equipping for leadership and leadership readiness-an overview and application to practice using mentoring activities. *Pediatric Nursing, 43*(1), 40.

Farr, J.V., & Brazil, D.M. (2009). Leadership skills development for engineers. *Engineering Management Journal, 21*(1), 3–8.

George, B. (2003). *Authentic leadership: Rediscovering the secrets to creating lasting value.* San Francisco, CA: Jossey-Bass.

Getha-Taylor, H., Fowles, J., Silvia, C., & Merritt, C.C. (2015). Considering the effects of time on leadership development. *Public Personnel Management, 44*(3), 295–316. https://doi.org/10.1177/0091026015586265

Ghimire, N.R., & Martin, R.A. (2008). Systematic Approaches to Leadership Development: What Are YOU Doing? *The Agricultural Education Magazine, 81*(1), 21.

Giber, D., Carter, L.L., & Goldsmith, M. (Eds.). (2000). *Linkage Inc.'s best practices in leadership development handbook: case studies, instruments, training* (1st ed.). Jossey-Bass.

Grantham, S., Pidano, A.E., & Whitcomb, J.M. (2014). Female graduate students' attitudes after leadership training: A case study. *Journal of Leadership Studies, 8*(1), 6–16.

Grossman, S. (2007). Assisting critical care nurses in acquiring leadership skills: Development of a leadership and management competency checklist. *Dimensions of Critical Care Nursing, 26*(2), 57–65.

Haber-Curran, P., & Stewart, T. (2015). Leadership skill development in a first-year honors service-learning seminar. *Journal of Community Engagement & Higher Education, 7*(2).

Hammond, D. (2003). *The science of synthesis: Exploring the social implications of general systems theory.* The University Press of Colorado.

Hayes, H., Parchman, M.L., & Howard, R. (2011). A logic model framework for evaluation and planning in a primary care practice-based research network (PBRN). *The Journal of the American Board of Family Medicine, 24*(5), 576–582.

Hendricks, F., & Toth-Cohen, S. (2018). Perceptions about Authentic Leadership Development: South African Occupational Therapy Students' Camp Experience. *Occupational Therapy International, 2018*, 1587906. doi: 10.101155/2018/1587906.

Hernez-Broome, G., & Hughes, R.L. (2004). Leadership development: Past, present, and future. *Human Resource Planning, 27*(1), 24+.

Holten, A.L., Bøllingtoft, A., & Wilms, I. (2015). Leadership in a changing world: Developing managers through a teaching and learning programme. *Management Decision, 53*(5), 1107–1124. https://doi.org/10.1108/MD-10-2014-0617

Jardine, D., Carrea, R., Schultz, H., Nobis, A., Lanser, B., Ahmad, I., Crowder, A., Kim, M., & Hinds, B. (2015). The need for leadership curriculum for residents. *Journal of Graduate Medical Education, 51*(1), 307–309. https://doi.org/http://dx.doi.org/10.4300/JGME-07-02-31

Jenkins, D.M. (2013). Exploring instructional strategies in student leadership development programming. *Journal of Leadership Studies, 6*(4), 48–62.

Katz, R. (1977). The influence of group conflict on leadership effectiveness. *Organizational Behavior and Human Performance, 20*(2), 265–286.

Kernis, M.H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry, 14*, 1-26.

Kiersch, C., & Peters, J. (2017). Leadership from the Inside Out: Student Leadership Development within Authentic Leadership and Servant Leadership Frameworks. *Journal of Leadership Education, 16*(1), 148–168.

Kirkpatrick, D., & Kirkpatrick, J. (2006). *Evaluating training programs: The four levels.* Berrett-Koehler Publishers.

Knight, D.B., & Novoselich, B.J. (2017). Curricular and co-curricular influences on undergraduate engineering student leadership. *Journal of Engineering Education, 106*(1), 44–70.

Kruse, K. (2012). What is leadership? In Mobley, W.H., Wang, Y., & Li, M. (Eds.). (n.d.). *Advances in Global Leadership (Advances in Global Leadership, Vol. 7)* (pp. 9–36). Emerald Group Publishing Limited. Bingley, https://doi.org/10.1108/S1535-1203(2012)0000007005

Lachance, J.A., & Oxendine, J.S. (2015). Redefining leadership education in graduate public health programs: Prioritization, focus, and guiding principles. *American Journal of Public Health, 105*, S60–S64. https://doi.org/10.2105/AJPH.2014.302463

Ladyshewsky, R., & Taplin, R. (2014). Leadership development using three modes of educational delivery: online, blended and face to face. *International Journal on E-Learning, 13*(3), 273–290.

Lapidus-Graham, J. (2012). The lived experience of participation in student nursing associations and

leadership behaviors: a phenomenological study. *The Journal of the New York State Nurses' Association, 43*(1), 4.

Lenihan, P., Welter, C., Brandt-Rauf, P., Neuberger, B., Pinsker, E., Petros, M., & Risley, K. (2015). The university of illinois at chicago school of public health doctor of public health program: An innovative approach to doctoral-level practice leadership development. *American Journal of Public Health, 105*(S1), S55–S59.

Leskiw, S.L., & Singh, P. (2007). Leadership development: Learning from best practices. *Leadership and Organization Development Journal, 28*(5), 444–464. https://doi.org/10.1108/01437730710761742

Lester, S.W. (2015). Melding Service Learning and Leadership Skills Development: Keys to Effective Course Design. *Journal of Experiential Education, 38*(3), 280–295. https://doi.org/10.1177/1053825915576196

Lord, R.G., & Hall, R.J. (2005). Identity, deep structure and the development of leadership skill. *The Leadership Quarterly, 16*(4), 591–615.

Malik, N., Dhar, R.L., & Handa, S.C. (2016). Authentic leadership and its impact on creativity of nursing staff: A cross sectional questionnaire survey of Indian nurses and their supervisors. *International Journal of Nursing Studies, 63*, 28–36.

Mansfield, K.C., Welton, A., Lee, P.L., & Young, M.D. (2010). The lived experiences of female educational leadership doctoral students. *Journal of Educational Administration, 48*(6), 727–740.

Marcus, S. (2004). Leadership in distance education: Is it a unique type of leadership–A literature review. *Online Journal of Distance Learning Administration, 7*(1).

McCauley, P., & Lee, E. (2015). A Call to Leadership. In *Success Strategies From Women in STEM* (pp. 335–364). Academic Press.

Melum, M. (2002). Developing high-performance leaders. *Quality Management in Health Care, 11*(1), 55–68.

Mortier, A.V., Vlerick, P., & Clays, E. (2016). Authentic leadership and thriving among nurses: The mediating role of empathy. *Journal of Nursing Management, 24*(3), 357–365.

Mukoza, S.K., & Goodman, S. (2013). Building Leadership Capacity: An Evaluation of the University of Cape Town's Emerging Student Leaders Programme. *Industry and Higher Education, 27*(2), 129-137.

Newcomer, K.E., Hatry, H.P., & Wholey, J.S. (2015). *Handbook of practical program evaluation.* John Wiley & Sons.

O'Brien, J., Hussey, S., & Sabonis-Chafee, B. (2012). *Introduction to occupational therapy.* Mosby.

Parham, D. (1987). Toward professionalism: The reflective therapist. *American Journal of Occupational Therapy, 41*, 555–561. doi:10.5014/ajot.41.9.555

Passarelli, A.M., Boyatzis, R.E., & Wei, H. (2018). Assessing leader development: Lessons from a historical review of MBA outcomes. *Journal of Management Education, 42*(1), 55–79.

Pernick, R. (2001). Creating a leadership development program: Nine essential tasks. *Public Personnel Management, 30*(4), 429–444.

Pierce, D., & Peyton, C. (1999). A historical cross-disciplinary perspective on the professional doctorate in occupational therapy. *American Journal of Occupational Therapy, 53*, 64–71.

Posner, B.Z. (2004). A leadership development instrument for students: Updated. *Journal of College Student Development, 45*(4), 443–456.

Praslova, L. (2010). Adaptation of Kirkpatrick's four level model of training criteria to assessment of learning outcomes and program evaluation in higher education. *Educational Assessment, Evaluation and Accountability, 22*(3), 215–225.

Reed, K., Aiello, D., Barton, L., Gould, S., McCain, K., & Richardson, J. (2016). Integrating leadership development throughout the undergraduate science curriculum. *Journal of College Science Teaching, 045*(05), 51–60. https://doi.org/10.2505/4/jcst16_045_05_51

Regan, S., Spence Laschinger, H.K., & Wong, C.A. (2016). The influence of empowerment, authentic leadership, and professional practice environments on nurses' perceived interprofessional collaboration. *Journal of Nursing Management, 24*(1), E54–E61.

Rosenman, E.D., Shandro, J.R., Ilgen, J.S., Harper, A.L., & Fernandez, R. (2014). Leadership training in health care action teams: a systematic review. *Academic Medicine, 89*(9), 1295–1306.

Rottmann, C., Reeve, D.W., Sacks, R., & Klassen, M. (2016). An intersubjective analysis of engineering leadership across organizational locations: Implications for higher education. *Canadian Journal of Higher Education, 46*(4), 146–173.

Royeen, C. (1995). A problem-based learning curriculum for occupational therapy education. *American Journal of Occupational Therapy, 49*(4), 338–48.

Sandfort, J., & Gerdes, K. (2017). The design, pedagogy and practice of an integrated public affairs leadership course. *Teaching Public Administration, 35*(1), 50–65.

Schell, B.A., & Cervero, R.M. (1993). Clinical reasoning in occupational therapy: An integrative review. *American Journal of Occupational Therapy, 47*(7), 605–610.

Schuhmann, R.J. (2010). Engineering Leadership Education–The Search for Definition and a Curricular Approach. *Journal of STEM Education: Innovations & Research, 11*.

Scott, S.M., & Tolar, M.H. (2009). The newest offering in the higher education leadership movement: A model campus-wide residential program for faculty and staff. *Educational Considerations, 37*(1), 25–30. https://doi.org/10.4148/0146-9282.1141

Spence Laschinger, H.K., Borgogni, L., Consiglio, C., & Read, E. (2015). The effects of authentic leadership, six areas of worklife, and occupational coping self-efficacy on new graduate nurses' burnout and mental health: A cross-sectional study. *International Journal of Nursing Studies, 52*(6), 1080–1089.

Spence Laschinger, H.K., & Fida, R. (2014). A time-lagged analysis of the effect of authentic leadership on workplace bullying, burnout, and occupational turnover intention. *European Journal of Work and Organizational Psychology, 23*(5), 739–753.

Spence Laschinger, H.K., & Smith, L.M. (2013). The influence of authentic leadership and empowerment on new-graduate nurses' perceptions of interprofessional collaboration. *Journal of Nursing Administration, 43*(1), 24–29.

Stander, F.W., de Beer, L.T., & Stander, M.W. (2015). Authentic leadership as a source of optimism, trust in the organisation and work engagement in the public health care sector. *SA Journal of Human Resource Management, 13*(1), 1–12.

Thach, E.C. (2002). The impact of executive coaching and 360 feedback on leadership effectiveness. *Leadership & Organization Development Journal, 23*(3/4), 205–214.

Thanaraj, A. (2016). Improving leadership practice through the power of reflection: An epistemological study. *International Journal of Learning, Teaching and Educational Research, 15*(9), 28–43.

Walia, S., & Marks-Maran, D. (2014). Leadership development through action learning sets: An evaluation study. *Nurse Education in Practice, 14*(6), 612–619. https://doi.org/10.1016/j.nepr.2014.06.004 or https://doi.org/10.1080/14767330701592714

Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S., & Peterson, S.J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management, 34*(1), 89–126. https://doi.org/10.1177/0149206307308913

White, B.J. (2017). A leadership and professional development teaching and learning model for undergraduate management programs. *Journal of Higher Education Theory and Practice, 17*(4), 57–74.

Wiewiora, A., & Kowalkiewicz, A. (2019). The role of authentic assessment in developing authentic leadership identity and competencies. *Assessment & Evaluation in Higher Education, 44*(3), 415–430.

Winston, B.E., & Patterson, K. (2006). An integrative definition of leadership. *International Journal of Leadership Studies, 1*(2), 6–66.

Yukl, G., & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: Practice and Research, 62*(2), 81.

Zenger, J.H. & Folkman, J. (2003). Developing leaders. *Executive Excellence, 20*(5).

APPENDIX

APPENDIX A
Leadership Learning Outcomes for Chatham University Entry-Level OTD Courses
    The table outlines leadership learning objectives for the Self-Awareness component of Authentic Leadership from the Fall Semester of the first year in the Entry-Level OTD Program at Chatham University.

Authentic Leadership Component	Learning Objective At the conclusion of the course, the students will be able to:	Course	Learning Activity
Self-Awareness	Understand how personal values connect to motivation, and how this has an impact on teamwork.	OTH 603: Intro to OT Skills	Ropes Course reflection paper
	Articulate the essential aspects of their personal leadership style as informed by their learning style.	OTH 603: Intro to OT Skills	Leadership and learning style reflection paper
	Discuss the process of theory development, historical theoretical influence, and the need for ongoing theory development in relationship to occupational therapy and describe how to improve upon personal leadership strengths and weaknesses.	OTH 626: Models of Practice	Perspective Assessment Pre/post personal leadership perspective assessment
	Compare and contrast selected models of practice used in occupational therapy and articulate personal and professional core values and beliefs.	OTH 626: Models of Practice	Personal Framework A Part A: Create your own framework pre-course Personal Framework B Part B: Create your own framework post-course
	Apply the elements of critical thinking when reading, interpreting, and analyzing professional literature and concepts to offer constructive feedback to peers and demonstrate self-awareness of unique leadership contributions.	OTH 626: Models of Practice	In Class Participation /Show or Tell Show or Tell an OT innovation, service, story Assignment: Models/ FOR Packet Socratic Seminar & Analysis of Model/FOR
	Articulate the essential aspects of their personal leadership style as informed by the leadership and personality-type assessments. The essential aspects include: personality type, leadership style, and foundational competencies (strengths and weaknesses) as informed by leadership and personality-type assessment instruments.	OTH 601: Foundations	Meyers-Brigg Inventory and Leadership Type Assignment

	Understand how their personal characteristics relate to effective leadership. This includes students understanding personal talents, values, and interests.	OTH 601: Foundations	Cultural Influences Reflection Paper
	Describe comfort level in using evidence-based practice (EBP) as it relates to leadership skills and abilities	OTH 612: EBP I	Self-reflection on strengths/weaknesses of current EBP skills & identification of comfort with ability to implement EBP skills in practice

APPENDIX B
Conger's Four Approaches to Leadership Development.

The following tables represent learning activities and/or assignments connected to each course learning outcome for the Self-Awareness component of Authentic Leadership. Each activity is categorized based on Conger's Four Approaches to Leadership Development.

Personal Growth

Semester	Course	Assignment	Component
Fall Y.1	OTH 601	Personal Narrative	Self-awareness
Fall Y.1	OTH 601	Meyers Briggs leadership style assignment	Self-awareness
Fall Y.1	OTH 603	VARK learning style/leadership style assignment	Self-awareness

Conceptual Understanding

Semester	Course	Assignment	Component
Fall Y.1	OTH 601	Introduction to Professional Behavior Assessment	Self-awareness

Feedback

Semester	Course	Assignment	Component
Fall Y.1	N/A	Feedback from advisor on Professional Behavior Assessment	Self-awareness
Fall Y.1	OTH 626	Socratic Seminar assignment	Self-awareness

Skill Building

Semester	Course	Assignment	Component
Fall Y.1	IPE	Ropes Course	Self-awareness