

Occupational Therapy Doctoral Capstone: Purpose and Value

The doctoral capstone is designed, implemented, and evaluated based on the accreditation standards as outlined by the Accreditation Council for Occupational Therapy Education (ACOTE®) and includes both a capstone project and an experience (AOTA, 2018). The purpose of this position statement is to describe the doctoral capstone component of the entry-level occupational therapy doctorate (OTD) degree for occupational therapists. As the culminating piece of the entry-level occupational therapy doctorate, the doctoral capstone provides students the opportunity for in-depth exposure in one or more of the eight areas of focus delineated by ACOTE, ultimately resulting in dissemination of project outcomes, and demonstrating synthesis of the skills and knowledge gained. The doctoral capstone is collaboratively designed as an individualized, student-centered, mentored experiential learning opportunity. Programs may choose from a variety of approaches to design and implement the doctoral capstone to meet ACOTE standards. Two such approaches include (1) self-directed learning and (2) backward design, which will be described in this document. The purpose of this position statement is not to be prescriptive, but to describe the purpose and value of the doctoral capstone component of the entry-level OTD degree.

This position statement has the following objectives:

- Describe the purpose of the doctoral capstone.
- Describe the value of the doctoral capstone to the student, mentor, profession, and external stakeholders.
- Describe the constructs that may be used in design of the doctoral capstone.

Key Terms and Definitions

Doctoral capstone: Capstone project and capstone experience as defined in the 2018 Accreditation Council for Occupational Therapy Education (ACOTE®) Standards and Interpretive Guide (effective July 31, 2020) (AOTA, 2018).

Capstone project: “A project that is completed by a doctoral-level student that demonstrates the student’s

ability to relate theory to practice and to synthesize in-depth knowledge in a practice area that relates to the capstone experience” (AOTA, 2018, p. 73).

Capstone experience: “A full-time in-depth exposure in a concentrated area that may include on-site and off-site activities that meets developed goals/objectives of the doctoral capstone” (AOTA, 2018, p. 73).

Collaborate: “To work together with a mutual sharing of thoughts and ideas” (AOTA, 2018, p. 73).

Service delivery: “Set of approaches and methods for providing services to or on behalf of clients” (AOTA, 2020, p. 83).

Client: A person, group, or population (AOTA, 2020, p. 75).

Student-centered: An approach to learning placing the student at the center of the learning process (Weimer, 2002).

Self-directed learning: A process in which students take initiative and, in the case of the doctoral capstone, create goals, strategies, and outcomes that drive the experience (Morris, 2019).

Mentoring: A bidirectional relationship that is planned, generative, and developmental and that facilitates meeting cocreated learning objectives (Ragins, 2012; Ragins & Verbos, 2007).

Backward design: A course and learning experience design method that begins with the learning goals or objectives, followed by developing the learning strategies and assessment approaches (Kelting-Gibson, 2005; Reynolds & Kearns 2017).

Importance/Significance of This Position Statement

As of 2021, there were 52 entry-level OTD programs accredited, and 145 at the candidacy/preaccreditation or applicant stage of accreditation, for a total of 197 entry-level OTD programs. The doctoral capstone is a required element in all entry-level doctorate programs, according to the educational standards established by ACOTE. Although there are limited data on doctoral capstone outcomes, the potential value it brings to students, graduates, mentors, clients, and the profession is likely significant. This position statement is based on available resources and provides information on the doctoral capstone’s purpose, design, and value to supplement accreditation standards.

The Doctoral Capstone

The doctoral capstone for occupational therapy programs consists of two components: (1) the capstone

project and (2) the capstone experience. ACOTE defines the capstone experience as “a 14-week full-time in-depth exposure in a concentrated area that may include on-site and off-site activities that meets developed goals/objectives of the doctoral capstone” (AOTA, 2018, p. 73). The capstone project and experience build on each other and provide an opportunity for doctoral-level students to synthesize their knowledge and relate theory to practice (AOTA, 2018).

Given the paucity of literature from an occupational therapy context, a review of capstone expectations in other health care professions with professional doctorates can provide context for the expectations of the occupational therapy doctoral capstone. Seegmiller et al. (2015) found that there is a trend in health care professions to move to an entry-level clinical doctorate, five of which require a capstone or original research project: nursing (American Association of Colleges of Nursing, 2015), physician assistant, clinical laboratory science, psychology, and physical therapy (Barlow et al., 2018). These fields all similarly define the capstone as an opportunity to translate evidence into practice, thus providing students the opportunity to integrate their learning into a culminating scholarly project that is applicable to professional practice in a broader sense than just clinical skills.

The doctoral capstone in occupational therapy is a culminating experiential learning opportunity that is collaboratively developed and individualized in alignment with the doctoral student’s own learning goals, creating a meaningful integration of knowledge and scholarship into professional practice that results in value to the student and potentially the profession. Whereas in fieldwork the primary focus is on students developing entry-level competency as generalist practitioners, the doctoral capstone provides an opportunity to learn a focused subset of skills concentrated on leadership, advocacy, administration, research, education, clinical practice, theory development, and/or program and policy development. The opportunity for the student to individualize and focus their learning throughout the project and experience is a valuable part of the doctoral capstone. Teaching and learning approaches of experiential

learning, self-directed learning, and backward design may serve to guide the learning process.

Prior to the capstone experience, students work in collaboration with a mentor or mentors to identify a need in practice/services by performing a needs assessment and literature review, which will inform their capstone development and the potential impact and value of the capstone to the site and mentor. In this way, the doctoral capstone may be also grounded in [Boyer's \(1990\)](#) Model of Scholarship of Application, bringing the student and mentor through the elements of discovery, integration, application/engagement, and teaching/learning. Through this mentored relationship the student has the opportunity to bring forward knowledge regarding what is known or has been shown to be efficacious, customize it to the site's needs, and then implement knowledge into practice during the experience. Students select means of measurement, collect information or data, and interpret outcomes of a project to summarize findings and make recommendations and/or determine efficacy. Through this immersive experience students also develop an awareness of complex factors that influence the ways in which theories, evidence, and knowledge discoveries can be implemented into day-to-day practices.

The capstone offers students the opportunity to integrate and/or apply what they have learned throughout their education into the design, implementation, evaluation, and dissemination of a project that meets the needs of a capstone site. Doctoral candidates are required to publicly disseminate the results of the doctoral capstone and are encouraged to do so via multiple venues, such as program, state, national, and/or international professional presentations, publications, and more. The doctoral capstone may occur in a variety of settings, including, but not limited to, medical, educational, and community-based programs. This allows for innovation across various settings and provides opportunities for the value of the doctoral capstone to be realized by external stakeholders and the profession as a whole. The doctoral capstone provides the opportunity to create, implement, evaluate, analyze, synthesize, and disseminate a scholarly practice-based project specific to a site,

providing value to the individual site. Value to the students is realized as they gain in-depth exposure in a focus area that can contribute to their confidence and competence as an entry-level practitioner and foster their professional autonomy as a leader.

Student-Centered and Self-Directed Learning

The doctoral capstone offers an opportunity for doctoral programs to provide a student-centered educational approach that is intentionally framed and guided through mentorship. Student-centered or learner-centered education is recommended to best meet the learner's needs while promoting application of learning as well as lifelong learning ([Weimer, 2002](#)). A variety of teaching strategies and learning experiences can be used to facilitate student-centered learning whereby the learner is an active participant in the learning process and not just a passive receiver of information. Self-directed learning is an essential part of student-centered learning. This shift to self-directed learning moves the responsibility to the learner, which aligns with the intended learning outcomes of a doctoral program and the requirement for an individualized project as outlined in the ACOTE standards ([AOTA, 2018](#)).

The individualized nature of the doctoral capstone affords students the opportunity to be self-directed learners throughout the design, implementation, evaluation, and dissemination phases. With roots in andragogy, adult education, and humanistic philosophy, self-directed learning involves learners taking responsibility for their own lifelong learning and includes concepts of autonomy, independence, and self-initiation ([Chu et al., 2012](#); [Knowles, 1975](#); [Loeng, 2020](#); [Tough, 1971](#)). Self-directed learners are active agents of change in their own learning process ([Jones, 2019](#); [Morris, 2019](#)). Self-directed learning has often been referred to as both the goal and the process of adult education and is a collaborative process between teacher or mentor and learner ([Loeng, 2020](#)).

Self-directed learning enables students to set individualized learning objectives, take actionable steps toward

meeting their learning objectives, and adjust the objectives as needed. As part of the doctoral capstone process, students work with a mentor (or mentors) to collaboratively set learning objectives in accordance with their own individual professional goals and the needs of the capstone site while also factoring in the expertise of the mentor(s). Self-directed learners can adapt to constantly changing needs or demands around them (Helterbran 2017; Morris, 2019), a necessary skill set for students to demonstrate during the entire process as they prepare for and participate in the doctoral capstone. The self-directed learning process involves learners choosing to expand and grow the specific knowledge, skills, or abilities that are imperative for meeting the needs of the learning task (Morris, 2019). This is represented in the individualized nature of the doctoral capstone through the preparatory steps of the literature review, needs assessment, evaluation plan, and individualized goals and objectives. The self-directed learning process is also supported through the identification of a mentor appropriate for the doctoral capstone project. Mentorship that matches the student's stage of self-direction and helps them advance toward greater self-direction is necessary for success (Grow, 1991).

Mentoring

The mentoring relationship that occurs during the doctoral capstone project planning and experience focuses on the personal and professional growth of the doctoral student. The relationship is planned, generative, developmental, and reciprocal (Ragins, 2012; Ragins & Verbos, 2017). During Level II fieldwork, the goal of the supervisory relationship is to foster students' development of skills and clinical reasoning essential for entry-level proficiency in the role of an occupational therapist in a specific practice setting. Mentorship in the doctoral capstone is a formal and collaborative relationship based on cocreated objectives. The mentor in this relationship has documented expertise in the student's identified area of focus and does not need to be an occupational therapist. However, in situations where a student's learning objectives may warrant it, an

occupational therapy mentor may also serve as a supervisor. Mentoring is a dynamic and interactive process of growth and learning between the student and mentor that evolves over time (Qiao Ting Low, et al., 2018).

Mentoring can be a meaningful relationship that can benefit both the mentor and mentee (Barker, 2006). For mentees, this process has been found to result in greater job satisfaction and higher performance evaluations. For mentors, they may find satisfaction in developing the next generation of professionals, mastering new skills, maintaining currency in evidence-based practice, improving overall job satisfaction, and potentially earning continuing education credit (Wanberg et al., 2003). The mentoring relationship provides the mentee with technical guidance that is interwoven with committed support, ongoing feedback, motivation, and empowerment to meet established goals or objectives within the identified timelines (Eby et al., 2013). At times, a mentor may serve as coach, adviser, advocate, role model, or liaison to professional networks. Mentors may offer directions, nurture skills, or provide opportunities for mentees to stretch and grow their skills in less directive ways.

Backward Design

To support the capstone as a student-centered, goal-focused, mentored experience and project, students, faculty, and mentors may find a backward design approach useful. *Backward design* is a method of designing courses or learning experiences that involves starting with the learning goals or objectives and then moving backward to identify and develop the details of the learning experience (Kelting-Gibson, 2005; Reynolds & Kearns, 2017). It ensures that goals, learning activities, and assessments are integrated and connected. Although faculty may find backward design useful for capstone development curriculum processes, the focus here is on students using the approach to collaboratively design their capstone.

To apply backward design during the capstone development process, students need to assess their own learning needs and professional development areas to identify potential goals or learning objectives. When developing objectives, students may find it helpful to

differentiate “must-haves” from “nice-to-haves.” “Must-haves” are essential knowledge, skills, and attitudes that are likely to transfer to other contexts and result in enduring understanding (Wiggins & McTighe, 2005). “Nice-to-haves” may support the “must-haves” but are not essential to determining or achieving the learning objectives. The initial objectives can help guide the site and mentor selection. Students refine their objectives in collaboration with their mentor(s) to connect students’ prior knowledge, mentors’ expertise, the capstone focus, and the students’ ongoing professional development.

After the learning objectives are established, the student and mentor(s) can determine how the objectives will be evaluated and what activities are needed to meet the objectives. The evaluation process may involve plans for both formative assessment (i.e., feedback during skill development) and summative assessment (i.e., evaluation of learning objectives). To support significant learning experiences, the activities should involve active doing and address multiple aspects of learning, such as foundational knowledge, application of skills, integration between ideas and experiences, learning about oneself and others, caring, and learning how to learn for ongoing self-directed knowledge (Daugherty, 2006; Fink, 2013). Throughout the capstone process, students reflect on their objectives, activities, and progress and make adjustments as needed, consistent with ongoing professional development.

Conclusion

The doctoral capstone provides an opportunity for knowledge and scholarship to be translated, disseminated, and integrated into practice. Doctoral capstones offer a means for the diverse capabilities of the occupational therapy practitioner and profession to be recognized and operationalized through their contributions during this project and learning experience. Students develop unique skill sets during the doctoral capstone that can help meet the needs of individuals, groups, organizations, and society as a whole.

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