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# Development, Implementation and Evaluation of Entry-Level Occupational Therapy Doctoral Capstones: A National Survey

## Abstract

Entry-level clinical doctorate degrees are becoming more prevalent in the United States for occupational therapy. As indicated by the Accreditation Council for Occupational Therapy Education® standards, the doctoral capstone is an essential component to the entry-level doctorate degree. Despite the importance of the doctoral capstone, there have been limited publications about doctoral capstone development, implementation, and evaluation. A retrospective review was completed on qualitative descriptive data from a national electronic survey of entry-level occupational therapy doctoral (EL-OTD) programs regarding implementation of the doctoral capstone experience and project. Fifteen EL-OTD programs responded to the survey. Based on results, there was not one universal framework used for development, implementation, or evaluation. Aggregate data is presented for the timeframe of the doctoral capstone, role of faculty advisors, professions of capstone site mentors, number of students completing the experience at more than one site, and methods used for evaluation of student performance. Of the eight possible focus areas for the doctoral capstone, advanced clinical skills was the focus most frequently selected followed by program and policy development. Understanding current methods used for development, implementation, and evaluation of the doctoral capstone allows mentors, community leaders, and occupational therapy educators to gain a greater understanding of the implications the doctoral capstone may have on student outcomes. Survey results indicate great variety in approaches to design, implementation, and evaluation of the doctoral capstone.

## Keywords

Doctoral capstone, occupational therapy education, occupational therapy, graduate education, professional practice

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## Development, Implementation and Evaluation of Entry-Level Occupational Therapy Doctoral Capstones: A National Survey

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### ABSTRACT

Entry-level clinical doctorate degrees are becoming more prevalent in the United States for occupational therapy. As indicated by the Accreditation Council for Occupational Therapy Education® standards, the doctoral capstone is an essential component to the entry-level doctorate degree. Despite the importance of the doctoral capstone, there have been limited publications about doctoral capstone development, implementation, and evaluation. A retrospective review was completed on qualitative descriptive data from a national electronic survey of entry-level occupational therapy doctoral (EL-OTD) programs regarding implementation of the doctoral capstone experience and project. Fifteen EL-OTD programs responded to the survey. Based on results, there was not one universal framework used for development, implementation, or evaluation. Aggregate data is presented for the timeframe of the doctoral capstone, role of faculty advisors, professions of capstone site mentors, number of students completing the experience at more than one site, and methods used for evaluation of student performance. Of the eight possible focus areas for the doctoral capstone, advanced clinical skills was the focus most frequently selected followed by program and policy development. Understanding current methods used for development, implementation, and evaluation of the doctoral capstone allows mentors, community leaders, and occupational therapy educators to gain a greater understanding of the implications the doctoral capstone may have on student outcomes. Survey results indicate great variety in approaches to design, implementation, and evaluation of the doctoral capstone.

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## **Introduction**

While the occupational therapy (OT) profession has been debating the move from the entry-level master's degree to the entry-level doctorate degree since the 1990s (Fisher & Crabtree, 2009); there has recently been a significant increase in the number of programs offering the degree. Brown et al. (2015) discussed this paradigm shift in OT education citing reasons both internal and external to the profession that impact this move toward entry-level clinical doctorate. In 2006, five out of 150 fully accredited entry level programs offered an entry-level doctorate degree (Griffiths & Padilla, 2006). In contrast, as of February 2020, there were 36 accredited entry-level occupational therapy doctorate (EL-OTD) programs and approximately 177 EL-OTD programs in the accreditation process (Accreditation Council for Occupational Therapy Education® [ACOTE®], 2020). A doctoral capstone is an accreditation requirement to complete the EL-OTD degree. All accredited programs must develop, implement, and evaluate a doctoral capstone per the ACOTE® standards. However, there have not been any published studies on the decision-making process or pedagogical approaches used to implement the doctoral capstone within the curriculum. Additionally, limited literature exists regarding the outcomes of the doctoral capstone.

## **Doctoral Capstone Overview**

Within health professions, the clinical doctorate has been traditionally driven by innovation in practice and the advancement of the health profession's field. The clinical doctorate degrees are meant to provide graduates with the skills to engage in direct clinical practice and leadership endeavors, including influencing program and policy changes (Royeen & Lavin, 2007). Within OT education, the entry-level clinical doctorate degree includes the doctoral capstone which provides an opportunity for in-depth professional practice within a given focus area (ACOTE, 2018). The doctoral capstone differs from a traditional master's thesis or doctoral dissertation in that it includes an experiential component. For a hands-on profession like OT, the experiential requirement can advance the development of proficient clinicians. The doctoral capstone also differentiates the EL-OTD degree from the master's degree, since the doctoral capstone is not required in master's programs (ACOTE, 2018). The doctoral capstone is an opportunity for the final integration and application of learned knowledge into the real world.

ACOTE standards for the doctoral level degree were developed in 2006 and have subsequently been revised in 2011 and 2018. During each revision of the ACOTE standards, the final requirement of the EL-OTD program changed names starting with doctoral-level educational component in 2006, refined to doctoral experiential component in 2011, and changed to doctoral capstone in 2018. While the name has changed, the primary purpose of the requirement has remained the same. ACOTE defines the purpose of the doctoral capstone as providing students with in-depth exposure to one or more of the following: leadership, advocacy, education, research, theory development, administration, program and policy development and/or clinical practice skills (ACOTE, 2018). In all three versions of the ACOTE standards, 2006, 2011, and 2018, this individualized doctoral capstone is seen as an essential component of the curriculum for the entry-level doctorate degree.

While the doctoral capstone can be individualized based on program mission, vision, philosophy, and curriculum design, programmatic considerations for the doctoral capstone may include student academic preparation, the roles and responsibilities of capstone key stakeholders, mentor selection, and capstone evaluation (Stephenson et al., 2020). For example, one program identified doctoral capstone experiences as “opportunities for students to apply EBP [evidence-based practice] protocols, collect data during intervention, and measure outcomes” (Case-Smith et al., 2014, p. e58). Another program highlighted that the doctoral capstone can include experiences that are “purposefully ambiguous” and can provide a general framework for developing both technical and soft skills (Smallfield & Wood, 2019, p. 17). Other OT academic leaders have identified the importance of ensuring the doctoral capstone experiences are of high quality with projects in research and program development that include effective dissemination to promote the profession (Whitney & McCormack, 2020). Collectively, all of these examples represent factors programs can consider in the doctoral capstone decision making process. This current study intends to expand on this knowledge base by providing information about the expected or current design and implementation of the doctoral capstone from current EL-OTD programs or programs transitioning from entry-level master to entry-level doctorate degrees. Information from current and transitioning EL-OTD programs about doctoral capstone implementation would likely benefit programs that are creating or updating the doctoral capstone.

Design of OT doctoral capstone projects and experiences are meant to provide the opportunity to develop in-depth knowledge in a student’s identified area of interest, in one of the designated focus areas. These plans must also align with the EL-OTD program’s educational curriculum design and sequence of the program. All preparation for the capstone experience and project must be completed before the 14-week doctoral capstone experience commences and must include a literature review and needs assessment as well as development of individualized learning objectives in the student’s desired area of interest (ACOTE, 2018). The doctoral capstone has a requirement for an evaluation of the student during the experience, and at the end there is a requirement for students to disseminate their capstone project (ACOTE, 2018). There is no information in the literature regarding how programs interpreted these standards, and whether or not these constructs overlapped in implementation.

### **Barriers to the Doctoral Capstone Process**

In the last three years, literature about the entry-level doctorate degree has expanded, but the limited available evidence consists mostly of expert opinions, and surveys (Brown et al., 2015) however little has focused on the doctoral capstone itself. Program directors of EL-OTD programs identified availability of sites for the doctoral capstone and resources, such as academically prepared faculty, as disadvantages or barriers to the EL-OTD degree (Ruppert, 2017). This perceived lack of sites and resources for the doctoral capstone was also seen as a barrier for entry-level master’s programs that chose not to transition to the entry-level doctorate degree (Ruppert, 2017). Understanding the various models and decision-making processes for the doctoral capstone used by EL-OTD programs could help to unpack the perceived disadvantages within the EL-OTD programs. Additionally, knowing how programs are implementing the

doctoral capstone may impact whether the doctoral capstone itself is seen as a perceived barrier in transitioning to the entry-level doctoral degree among interested entry-level master's programs (Ruppert, 2017).

### **Purpose**

This timely study helps to fill the current void in literature related to programs' design and implementation of the doctoral capstone. With a retrospective analysis of the data collected, the purpose of this study was to examine various programs' processes for the doctoral capstone project and experience.

### **Methodology**

Given the wide variation in EL-OTD program design, the objective of this study was to determine how the doctoral capstone was being planned, implemented, and evaluated by EL-OTD programs throughout the United States. The study was a retrospective review of the data collected from a qualitative descriptive electronic survey describing the current state of the entry-level doctoral capstone at the point and time of administration in Fall 2018. The descriptive survey methodology was utilized as there is limited prior research and literature on the topic of the entry-level doctoral capstone project and experience.

The survey was built via Survey Monkey, using a professional account held by one of the universities involved in the research. The survey was developed by an ad hoc committee of the Academic Leadership Council, Academic Fieldwork and Capstone Coordinators (AFWCC) section, consisting of doctoral capstone coordinators at four different institutions in the United States, of differing sizes, program designs, geographical regions, and varying years in implementing doctoral capstones. Questions were guided by both the 2011 and 2018 ACOTE Standards for the doctoral capstone, due to the transition period between standards. Questions were also designed to elicit information regarding capstone development which included instructional design, capstone implementation which included faculty resources and timeline, and capstone evaluation of learner characteristics utilized throughout the individualized doctoral capstone (ACOTE, 2018). The survey was reviewed by the committee, and questions were refined after each of three iterations. In total, there were nineteen questions of both multiple-choice and open-ended styles. An example of an open-ended question was: "based on your last academic year, please list your top three deliverables/products that students produced from their capstone experiences."

An electronic consent was included as the first screen of the survey, giving individuals information regarding the committee that created the survey, its general purpose, time needed to complete, and how data would be utilized. Instructions for completion of the survey included language that indicated the questions were regarding the implementation of the capstone. The survey link was distributed via the AFWCC Listserv that was hosted through AOTA. At the time of distribution, there were a total of 134 EL-OTD programs: 28 accredited programs, 34 candidate programs, and 72 applicant programs. The survey was open for six weeks to account for faculty time constraints indicated by that point in the academic calendar. One reminder email was

sent through the same Listserv. Exempt status by the Institutional Review Board (IRB) at the lead author's university was received. This retrospective review took place one year after the data was initially gathered.

### **Data Analysis**

The data gathered from this descriptive electronic survey was analyzed and compiled through a secured institutional Survey Monkey account. Descriptive statistics and reports generated by Survey Monkey were examined retrospectively to consider the current and forecasted direction of the doctoral capstone. Open-ended responses to questions regarding outcomes and products were coded using content analysis (Creswell & Creswell, 2017). Each of the authors of this paper generated individual categories and consensus was reached through discussion.

### **Results**

Results will be presented related to the development, implementation, and evaluation of the components of the doctoral capstone as defined by the 2018 ACOTE Standards. Fifteen EL-OTD programs responded to the survey, providing a 23% response rate of accredited and candidate programs.

#### **Development of Capstone Experience**

Respondents were asked to describe the amount of time faculty advisors at the EL-OTD program consult with students and provide mentorship prior to and during the doctoral capstone experience. Fifteen programs responded to the question about frequency of faculty advisor consultations *prior* to the doctoral capstone experience, which included: weekly (27%, n=4), biweekly (27%, n=4), or monthly (13%, n=2). Thirty-three percent (n=5) of respondents identified the frequency of the faculty advisor consultations as "other," which included: no information to report; no consultations prior to the doctoral capstone experience; weekly planning during class, followed by bi-weekly consultation on fieldwork; and two to four times in the two months prior to doctoral capstone.

Fourteen programs responded to a question about when faculty advisor consultations occurred *during* the doctoral capstone experience, including: weekly (43%, n=6), biweekly (7%, n=1), or monthly (21%, n=3). Twenty-nine percent (n=4) of programs identified "other" which included: no information to report; a midterm call only; a monthly consultation at minimum; two times for students, but more frequently for students who are struggling.

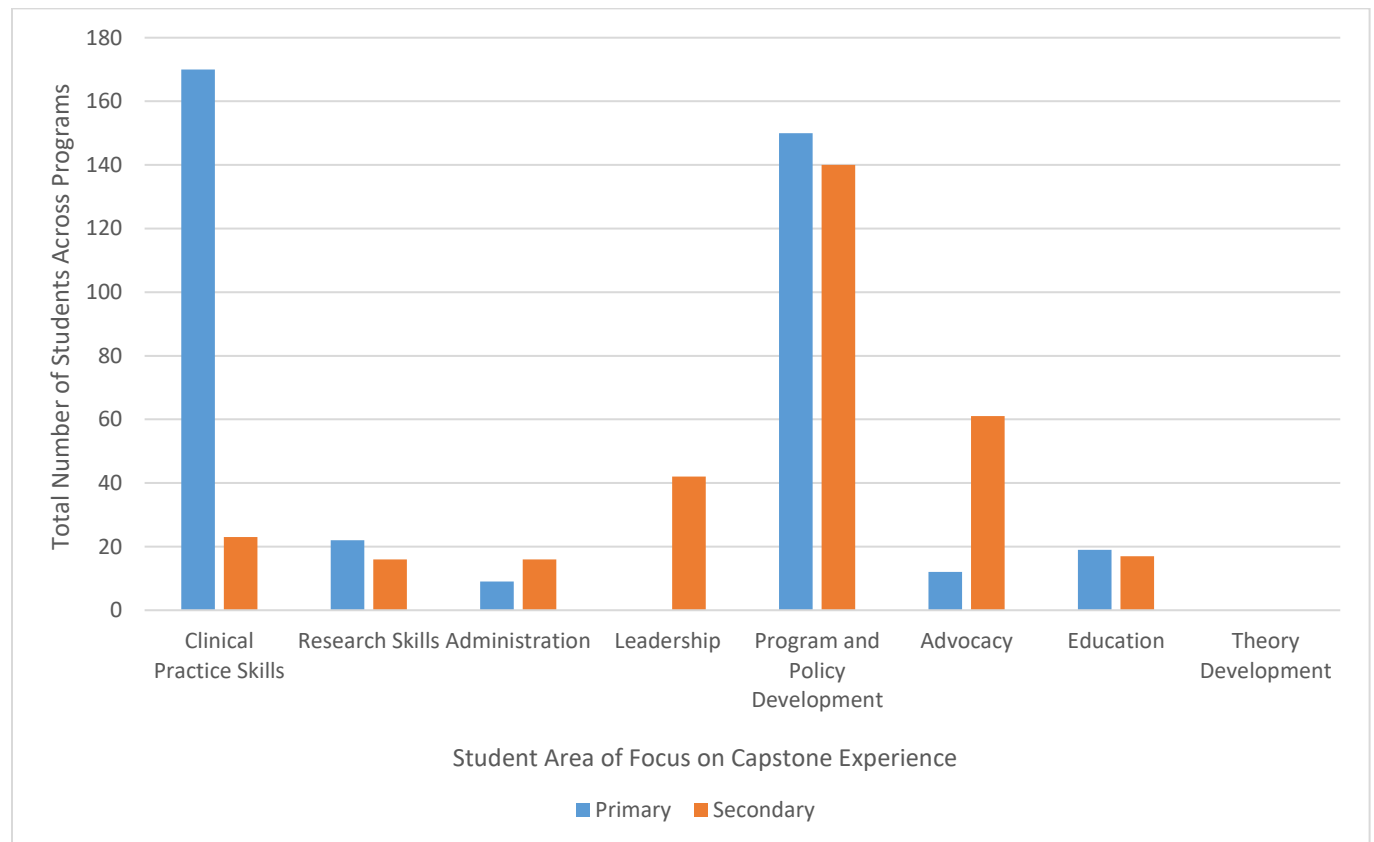
#### **Implementation of Doctoral Capstone Experience**

Of the 15 programs, 10 programs placed 21-60 students per year in doctoral capstone rotations, four programs placed 0-20 students per year, and one program placed 61 or more students per year. The 15 programs utilized different time frames for the doctoral capstone experience including: winter (20%, n=3), spring (33%, n=5), summer (7%, n=1), fall (7%, n=1), and fall/spring (33%, n=5). Of the eight focus areas (clinical practice skills, research skills, administration, leadership, program and policy development, advocacy, education, and theory development) identified by ACOTE

(2018), 13 programs responded with the majority of students completing clinical practice skills and program and/or policy development as primary and secondary areas of focus for their doctoral capstone experience and/or project (see Figure 1).

Figure 1

*Number of Doctoral Capstone Students per Capstone Area of Focus (N=13)*



Programs also responded to several questions regarding the doctoral capstone experience. Table 1 represents the professional background of mentors at the doctoral capstone site(s) as reported by 13 programs. Programs were asked to identify how many students completed doctoral capstone experiences at one site, two sites, or three or more sites. While the majority of students were reported to be at one site (12 programs) there were eight programs that reported students completing doctoral capstone experiences at two sites, and three programs that reported having students at three or more sites. Fourteen out of 15 programs responded that students were completing a portion of their doctoral capstone experience hours off-site, and nine programs reported that students were able to complete their doctoral capstone experience internationally, while six replied this was not available.



Table 1

*Professions of Mentors of Doctoral Capstone Experiences*

<i>Type of Professional</i>	<i>Number of Programs Using Professional as Site Mentor</i>
Occupational therapist	12
Physical therapist	5
Medical Doctor/Doctor of osteopathic medicine/Nurse practitioner	4
Social work	9
Nurse	3
Speech language pathologist	1
Teacher	5
Business owner/manager	7
Psychologist	3
Administrator/director	3
Recreational therapist	1
Prosthetist	1
Researcher/Academic	1
Graphic designer	1

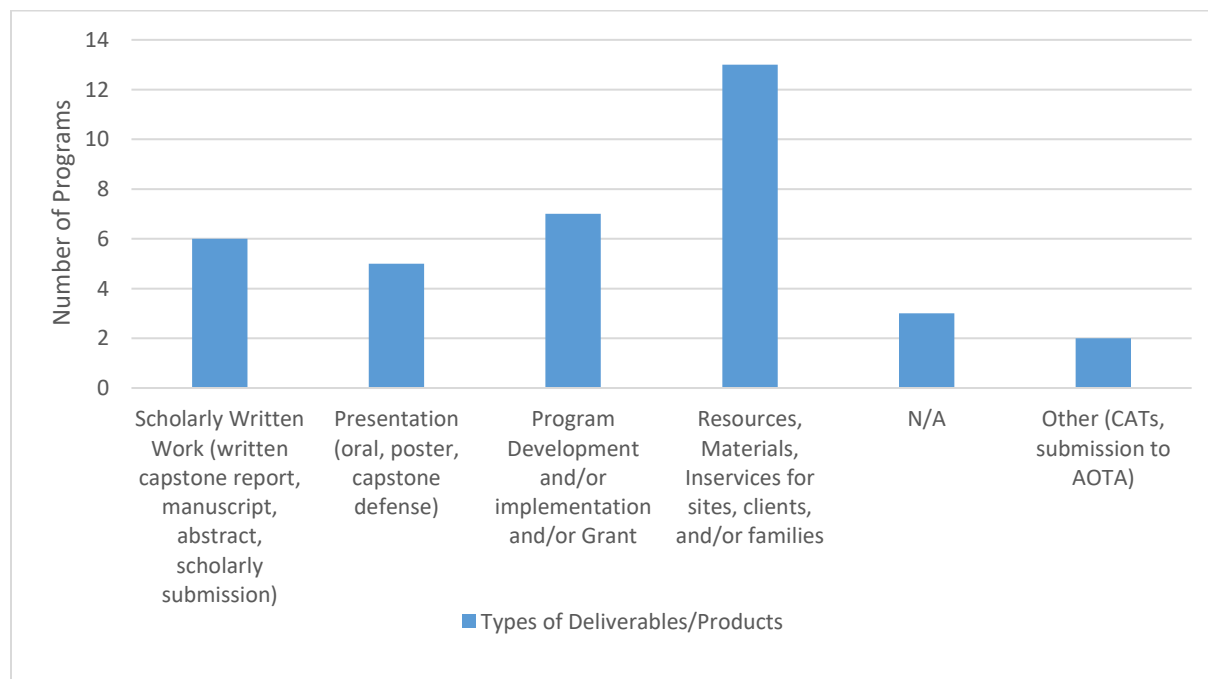
Finally, programs were asked to provide examples of resources that would support the implementation of the doctoral capstone experience for programs, students, and sites. From the eight responses to this question, programs provided examples which included: manual creation and consultation support, materials that provide more specific direction on rigor, general requirements, and clear definitions as well as resources for mentor education.

### Evaluation of the Doctoral Capstone Experience

Open-ended responses were collected from a survey question that asked for the top three types of deliverables or products that students produced during their doctoral capstone experience. Twelve programs responded to the open-ended questions and results were coded and categorized (see Figure 2). The majority of programs responded that the deliverables for the doctoral capstone experience were the same as the doctoral capstone project, while two responded that the project was distinctly different, one had nothing to report, one reported that the deliverable was an outcome of the project and a last replied that their program does not distinguish between doctoral capstone project and experience. For evaluation of the student's performance on the doctoral capstone experience, programs were asked to select all that applied among the following: final evaluation, portfolio, presentation/poster, and manuscript. Among 14 programs, the most frequently used evaluation was a final evaluation of learning objectives (93%, n=13), followed by poster presentation (79%, n=11), manuscript (43%, n=6), and portfolio (21%, n=3).

Figure 2

#### *Types of Deliverables Provided by Doctoral Capstone Students to the Capstone Site*



## Discussion

The purpose of this descriptive study was to begin to build a knowledge base of the frameworks currently used, or anticipated for use, with the implementation of doctoral capstone experiences and projects at EL-OTD programs across the United States. Programs were at various stages of the accreditation process, so some responses were indicative of programs that had previously or were currently sending students on doctoral capstone experiences, while other responses may have been indicative of programs that had not yet carried out a full cycle of doctoral capstone. The results of this study suggest that programs use varying methods of development, implementation, and evaluation for the doctoral capstone, which are based on the ACOTE standards, as well as an alignment of their doctoral capstone process to their unique university and program missions and curricular designs. If the purpose of the clinical doctorate is to drive and grow innovative clinical practice (Royeen & Lavin, 2007) it would follow that variation in educational programs and doctoral capstone models would exist given the variation in practice settings and regions of the country. A better understanding of the varying methods used for doctoral capstone may lead towards more cohesive development of ACOTE standards in the future as well as better definition of the role of the EL-OTD versus other professional and/or research doctoral degrees.

### Development of the Doctoral Capstone Experience

Faculty involvement versus mentor involvement at a doctoral capstone site varied among programs. The majority of programs reported faculty consultations occurring weekly both *prior to* and *during* the doctoral capstone experience. The effects on faculty workloads must be considered in preparing a well-rounded team of support for individual students. Other professional programs, such as social work, have shown that multiple responsibilities and larger class sizes have increased the demand placed on faculty, therefore, decreasing the potential to offer individualized instruction (McMurtry & McClelland, 1997). A clinical doctorate nursing program found that aligning their scholarly projects with clinical partners increased scalability of the projects as well as made good use of faculty resources (Miley & Reinisch, 2016). The EL-OTD program must approach this area of faculty workloads with caution while still ensuring they meet the ACOTE requirement for an individualized experience for each student.

### Implementation of the Doctoral Capstone Experience

This survey showed that the majority of students were completing doctoral capstones in clinical practice skills and program and/or policy development. Programs also used focus areas in academia/education, research, advocacy, administration, and leadership, but none used theory development. The focus area emphasis chosen for the doctoral capstone reflects the individual university's curriculum design (ACOTE, 2018), ensuring the in-depth doctoral capstone allows for pedagogical creativity, collaboration, scholarship, and innovation.

This survey showed that the highest number of capstones across the country are focused on clinical practice skills, thereby supporting the idea that enhanced clinical practice skills are desired by students and supported by both clinical partners and many universities. One proposed purpose of the EL-OTD is to develop practitioners who can

apply research evidence in practice and make use of solid outcome measures which should help to close the research to practice gap and enhance both clinical practice skills and client outcomes (Case-Smith et al., 2014).

The survey indicated that a total of 150 students from ten programs completed a doctoral capstone experience with the primary focus in program/policy development, which was the second-highest primary focus area. It was also the highest secondary focus area identified by all programs. These results indicate that students on a doctoral capstone experience, whether it is in traditional settings or in an emerging practice area, may benefit from having basic knowledge of business and program development strategies in addition to research application knowledge (Brachtesende, 2005).

While results indicated that the focus areas of administration, leadership, research, and education were used, they were not used as often as clinical practice skills and program and policy development. It is suggested that clarification and definition be created for all doctoral capstone focus areas which may support programs, students, and mentors in developing additional doctoral capstones. Examples of doctoral capstones within each of these areas may help guide thinking and innovation in development of capstones. This survey did not collect data regarding the specific types of settings in which the doctoral capstones were happening. The survey did collect information regarding the time of year the capstone happens, showing there was no consistency for when doctoral capstones were occurring. Consistent dates as previously established by AOTA for Level II fieldwork are no longer in use effective 2022. This decision by the AOTA Commission on Education was made after a survey showed that only 30% of programs were using suggested start dates (N. Harvison, personal communication, December 11, 2019). This capstone survey also showed that there was low consistency in timeframes for the capstone experience. Therefore the impact on Level II fieldwork availability is unknown.

While 12 out of 13 programs (92%) reported using OTs as a mentor at the doctoral capstone site, students were also mentored by professionals from disciplines outside of OT. For instance, social workers were used as mentors for nine programs (69%) and business owners/managers served as mentors for seven programs (54%). Due to the variety in backgrounds and professional experience of the mentors at the doctoral capstone site(s), education regarding the purpose of the doctoral capstone and the expectations of the student while on the doctoral capstone experience is imperative. Therefore, if not already doing so, it would be beneficial for capstone coordinators to provide instruction to the site mentors to assist in identifying the value added by the doctoral capstone project for the individual organization or professional development. Additional resources for professional development of the site mentors was also identified as a need by respondents. While ACOTE 2018 Standards define both mentoring and supervision in the glossary, there is an identified need for additional resources that exist within other disciplines (American Board of Physical Therapy Residency and Fellowship Education [ABPTRFE], 2019; Butterworth & Faugier, 2013).

### **Evaluation of the Doctoral Capstone Experience**

Survey results indicated there was no consistency among programs in terms of how evaluation was completed or what was evaluated for each student. No standard form of evaluation of the doctoral capstone experience currently exists, which may explain the great variety of program responses. For example, a doctoral capstone project may or may not be a deliverable to the doctoral capstone site, and the doctoral capstone project completion may or may not impact evaluation of student performance during the doctoral capstone experience.

Student-centered learning objectives may be one data point used to evaluate student performance. A standardized doctoral capstone evaluation similar to the Fieldwork Performance Evaluation (AOTA, 2002) used for Level II fieldwork may limit the individualized nature of those objectives being created. A standardized evaluation may also restrict the ability of the EL-OTD program to match the doctoral capstone design to their individual curriculum design, as is also required by ACOTE Standards (ACOTE, 2018). However, the benefits of a standardized evaluation template may offer more consistent language and understanding of a doctoral capstone experience. Using a consistent pedagogical approach for the doctoral capstone may also provide guidance for programs and professionals for the continued development of effective capstone evaluations.

### **Limitations**

There were several limitations to the retrospective review. At the time of this study, there were 63 EL-OTD programs, with only 15 participating universities in the survey resulting in a low response rate. In an effort to gain increased responses, identifying information was not collected as some programs preferred not to share their proprietary information. Survey questions were structured around the accreditation standards. While the survey provides a foundational basis to build from when understanding doctoral capstone projects and experiences, additional information would help differentiate the findings into more meaningful data for the profession. For example, a baseline was created through this study for the number of students that selected specific ACOTE focus areas. Additional information in regard to how students meet specific capstone plans in accordance with the focus area would provide a richer description of doctoral capstone implementation. At the time of this research, the 2011 ACOTE Standards were in effect and have since been revised. Further research on the implications of doctoral capstones is warranted as newly accredited OT doctoral programs become established and the new 2018 ACOTE Standards became effective July 31, 2020.

It is unknown whether the doctoral capstones with a focus on clinical skills were completed at sites that also offered fieldwork opportunities. Understanding the usage of traditional clinical sites for doctoral capstone, as well as understanding the benefits and challenges to using this type of placement model will assist in determining the current landscape and relational impact that doctoral capstone and fieldwork may have on one another. Additionally, it is unclear how programs defined a secondary focus, and no formal definition was provided within the survey. Due to the lack in definition, it was

unclear how much time students spent in primary versus secondary focus areas. Having this information could help programs begin to make decisions about the design and implementation of the doctoral capstone experience, which could have an impact on the types of doctoral capstone site(s) utilized.

While the survey was intended for programs with applicant, candidate, or accredited program status through ACOTE, many of the questions were phrased in past tense. This may have been confusing for programs who had not yet sent students on the doctoral capstone and may have been a barrier for some programs to participate in the survey. In order to increase response rates, future survey development may benefit from utilization of questions that are inclusive to developed as well as developing programs. Future surveys may benefit from providing a response option such as 'not applicable to a developing program' in order to increase precision in data analysis.

### **Implications for Occupational Therapy Education**

The doctoral capstone is a fundamental part of an EL-OTD program's curriculum design (ACOTE, 2018). Compared to the 2011 ACOTE Standards, the 2018 ACOTE Standards have increased expectations and shortened the timeframe for the doctoral capstone. The in-depth exposure to the doctoral capstone areas of focus is one key difference between EL-OTD programs and entry-level master's programs. Additional evidence about the entry-level doctorate degree and doctoral capstone allows mentors, community leaders, and OT educators to gain a greater understanding of the implications the doctoral capstone has on student outcomes. Students specifically are seen as both stakeholders and consumers within higher education (Carlson, 2013). Prospective OT students would benefit from understanding the broad aims of the doctoral capstone and the general options available for the doctoral capstone design and implementation. Other primary stakeholders who could benefit from understanding the current trends in doctoral capstone implementation include current programs offering the entry-level doctorate degree, programs intending to offer the degree, programs interested in switching to the degree, and the administration at any of the aforementioned programs. Understanding the doctoral capstone development, implementation, and evaluation represents an important part of this assessment.

The doctoral capstone is a unique experience and lays the foundation for advancement and advocacy for the OT profession. The individual nature of the doctoral capstone allows the student to enhance personal and professional skills beyond the skills developed throughout the prior fieldwork experiences (Wilburn et al., 2016). Results from the survey indicated there was great variety in each program's approach to development, implementation, and evaluation of the doctoral capstone which can result in a vast number of doctoral capstone projects that have the potential to greatly impact the development of future leaders, and expand the reach of the profession.

The field may need to continue to be creative in thinking outside of traditional medical settings and as part of their capstone planning process, as well as to specifically ask students and mentors how they plan to differentiate the capstone experience from a Level II experience.

### Future Research

This study represents the start of filling the empirical gap that currently exists related to the doctoral capstone. The survey results support a need for further exploration in order to understand how programs across the country are interpreting the ACOTE Standards for the doctoral capstone. As one survey respondent aptly wrote: “Mentors need resources that are specific to the doctoral capstone, mentors need education regarding the difference between doctoral capstone experiences and projects. Each [EL-]OTD program runs their doctoral capstone differently - some have the project separate - with a tie to the doctoral capstone experience - while others have the doctoral capstone experience and project rolled into one. AOTA and each [EL-]OTD program should have information available on their website that provides definitions, resources, and samples.”

The doctoral capstone experience and project has not been thoroughly studied in OT education. An increasing number of programs are offering or starting EL-OTD programs throughout the country which require the development of curriculum that links the doctoral capstone experience and project both to learning outcomes and to professional practice at large. Future areas of research that could support the Occupational Therapy Education Research Agenda would include instructional methods such as use of backward design, creation of sustainable doctoral capstone models and benefits of international experiences (AOTA, 2018). Another priority within this research agenda may be addressing evaluation and the impact of doctoral capstones on the creation of new professional practice areas as well as the long-term outcomes of doctoral capstone experiences for OT practitioners. Additionally, by researching effective mentoring strategies utilized throughout the doctoral capstone, the impact could be measured regarding learner characteristics and faculty development and resources.

### Conclusion

Calls for more understanding of the entry-level doctorate degree have been made (Lucas Molitor & Nissen, 2018). This study contributes to the communal knowledge about a critical component of the entry-level doctorate degree. This survey provides insight into the types of doctoral capstones most commonly created, the creativity in implementation of doctoral capstone in its entirety, and the innovative use of site mentors outside of OT. Suggestions include the need for educational resources to be developed for practitioners/mentors regarding the doctoral capstone, ways to track how the capstone affects emergence of new professional practice areas, as well future educational research.

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