Perceived Value & Usefulness of the Entry-Level Occupational Therapy Doctoral Capstone

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Abstract

The doctoral capstone is the culminating experiential learning component of the entry-level occupational therapy doctorate degree, however there is limited literature regarding its usefulness or value as perceived by graduates. This qualitative descriptive study used focus groups with a semi-structured interview guide to ask participants about the value and usefulness of their doctoral capstones. A total of 200 recent occupational therapy doctorate (OTD) graduates from three OTD programs in the Midwest and Southwest were contacted and 21 consented to participate. Researchers identified several themes that were relevant to both occupational therapy practitioners and occupational therapy programs. The four themes that emerged were (1) *Becoming a Professional: Recognition of Professional Skill Development,* (2) *An Essential Skill to Be a Life-long Learner: Self-directed Learning*, (3) *Finding Employment: Impacts on Career Trajectory*, and (4) *Shifting from Student to Professional: Impacts of Mentorship.* Barriers and disadvantages were also tracked and reported. Despite differences between occupational therapy programs, graduates reported many similar experiences indicating the value and usefulness of the doctoral capstone. Understanding perceptions held by recent graduates regarding the value and usefulness of the doctoral capstone may enhance program faculty members' abilities to design capstone curriculum, support the need to develop mentors, and to continue education regarding the doctoral capstone to the profession at large.

Keywords

Doctoral capstone, value, occupational therapy

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Entry-Level Occupational Therapy Doctoral Capstone

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ABSTRACT

The doctoral capstone is the culminating experiential learning component of the entry-level occupational therapy doctorate degree, however there is limited literature regarding its usefulness or value as perceived by graduates. This qualitative descriptive study used focus groups with a semi-structured interview guide to ask participants about the value and usefulness of their doctoral capstones. A total of 200 recent occupational therapy doctorate (OTD) graduates from three OTD programs in the Midwest and Southwest were contacted and 21 consented to participate. Researchers identified several themes that were relevant to both occupational therapy practitioners and occupational therapy programs. The four themes that emerged were (1) *Becoming a Professional: Recognition of Professional Skill Development,* (2) *An Essential Skill to Be a Life-long Learner: Self-directed Learning*, (3) *Finding Employment: Impacts on Career Trajectory*, and (4) *Shifting from Student to Professional: Impacts of Mentorship.* Barriers and disadvantages were also tracked and reported. Despite differences between occupational therapy programs, graduates reported many similar experiences indicating the value and usefulness of the doctoral capstone. Understanding perceptions held by recent graduates regarding the value and usefulness of the doctoral capstone may enhance program faculty members' abilities to design capstone curriculum, support the need to develop mentors, and to continue education regarding the doctoral capstone to the profession at large.

Background

Since their inception, occupational therapy programs have undergone paradigm shifts in how they prepare entry-level therapists. The evolution of occupational therapy education includes the profession-mandated move to post-baccalaureate education in 2002, with all programs in compliance by December 2007 (American Council for Occupational Therapy Education [ACOTE], 1999). Standards for both entry-level occupational therapy doctorate (OTD) and masters (OTM) programs were created in 2006 and implemented in 2008 (ACOTE, 2012). Initially, there were no perceived differences between bachelor's and entry-level OTM graduates (Hinton, 2005). This critique was also raised regarding the distinction between the OTM and entry-level OTD (Brown et al., 2015; Ozelie et al., 2020). While prior literature regarding the OTD is limited, a growing body of work supports the OTD and its impact on the profession (Kemp et al., 2020; Lucas-Molitor & Nissen, 2018; Ozelie et al., 2020). Several healthcare professions have implemented clinical doctoral programs, and this advanced education is now standard for several of them (Campbell, 2011; Krusen et al., 2020; Seegmiller et al., 2015;). As the profession of occupational therapy continues to mature, the number of entry-level OTD programs has grown (American Occupational Therapy Association [AOTA], 2020). However, still debated within the profession are costs, benefits, and outcomes of the move from OTM to OTD.

One significant difference in accreditation standards between the OTM and OTD is the requirement of a doctoral capstone, which includes both a project and experiential component (ACOTE, 2018). ACOTE requires that the doctoral capstone align with the program's mission and values, as well as demonstrate clear ties to its curricular design (2018). Each OTD program is autonomous, and programs can design their doctoral capstone to enhance their curriculum, institution, and mission. However, several of the commonly required capstone elements of a self-directed project and experience are outlined in the ACOTE standards (2018). The standards provide a structure for the doctoral capstone that allows the student to gain in-depth knowledge about a specific topic, practice setting, or professional problem and encourages them to apply their learning in a real-world setting. This experiential learning opportunity is the last required element in an OTD program, which, coupled with fieldwork, takes the students through the transition from student to clinician.

The doctoral capstone experience and project as required and defined by ACOTE is one possible avenue to producing practitioners who are better prepared to implement evidence into practice, highlight occupational therapy's distinct value in health care, as well as to demonstrate leadership on inter-professional teams (Case-Smith et al., 2014; Provident & Lape, 2020). A study from one Midwestern university showed that, relative to OTM graduates, OTD graduates were more likely to (1) use evidence in their practice, (2) own a business or hold a leadership position, (3) be an educator or academic, (4) be involved in research, and (5) be involved in professional activities (Smallfield et al. 2019). Lucas-Molitor and Nissen (2018) surveyed graduates across the country and found that OTD graduates were more likely to be working in academia and OTM graduates were more likely to be working in the clinic, supporting these findings. While these outcomes suggest that the doctoral degree may lead to differences in

practice and work setting, they do not provide a clear picture regarding the outcomes of the doctoral capstone itself. Recigno and colleagues (2020) suggested that in the doctoral capstone, students hone skills and increase confidence in advocating for the profession. Whitney and McCormack (2020) suggested that the doctoral capstone may address the profession's research agenda and contribute to value-based care and measures that can demonstrate the value of occupational therapy.

While there are recent surveys regarding the difference in self-reported outcomes of OTD and OTM graduates (Ozelie et al., 2020; Sargent et al., 2020), no studies have looked specifically at the perceived value and usefulness of the doctoral capstone. Given that the doctoral capstone is one key difference between the two degrees, understanding its perceived value by recent graduates is of benefit to doctoral programs, community sites, and potential and current capstone mentors. Doctoral programs can capitalize on this information as they create and refine their curriculum, and mentors, who collaborate with capstone students, may gain a sense of the impact their role has on students' potential perspectives. The purpose of this study was to gain knowledge and understanding of recent OTD graduates' perceptions of the value and usefulness of all components of the doctoral capstone including project and experience.

Methods

A qualitative descriptive study (Sandelowski, 2000) using virtual, semi-structured, focus groups (Krueger & Casey, 2015) was conducted to explore OTD graduates' perceptions of the value and usefulness of the doctoral capstone. Qualitative descriptive methodology was chosen to draw on the ideas, perceptions, and beliefs of participants surrounding their unique capstone experiences. Due to the individualized nature of the capstone both between programs and among students, a qualitative descriptive approach best provides the opportunity to gather the greatest breadth and depth of graduates' perceptions. The Institutional Review Boards (IRB) at each institution determined this study to be exempt.

Participants

A self-selected, convenience sample of recent graduates from three occupational therapy programs in the Midwest and Southwest regions of the United States was used. The programs were of different size, design, and institution type. Participants were selected based on their successful completion of an entry level OTD doctoral capstone within the past six months. Institution A was an OTD program in the Midwest at a R1 public institution with 46 OTD graduates, institution B was an OTD program in the Midwest at a D/PU private non-profit institution with 109 graduates, and institution C was a R2 public institution in the Southwest with 45 OTD graduates. In total, two hundred graduates were invited to participate in the research process.

Instrument

A semi-structured interview guide was developed to facilitate the focus groups. The interview questions targeted the graduates' beliefs about the value and usefulness of the doctoral capstone project and experience. Questions two through five addressed the value of the doctoral capstone. Questions six and seven inquired about the usefulness

of the capstone by examining skills learned and applied in participants' job search and/or practice. The questions were developed by a capstone coordinator and a research methodologist and were then reviewed for face and content validity by two additional capstone coordinators.

1. Why did you decide to pursue a doctoral degree rather than a master's degree?
2. What did you find to be most valuable about your doctoral capstone?
3. How did your interactions with your site mentor impact or shape your capstone experience?
4. How did your interactions with a faculty member impact or shape your doctoral capstone?
5. In what ways did the capstone experience help you develop professionally?
6. What specific skills did you learn through your capstone experience?
7. How have the experience and skills gained during the doctoral capstone impacted your current or future practice?
8. What barriers did you run into during your doctoral capstone? Try to think about things beyond just your specific program's curriculum.
9. What disadvantages do you see to the doctoral capstone process?
10. What did you think about having the capstone project and experience individualized to your specific area of interest?
11. Any other thoughts you'd like to share on the doctoral capstone process?

Data Collection and Procedure

Recruitment
After IRB approval at each institution, all eligible participants from each of the three institutions received an email invitation to participate in the study. The email contained a link to an electronic informed consent acknowledgement. Participants were informed that the sessions would be recorded to allow for transcription and that, once transcriptions were reviewed for accuracy, the recordings were deleted following transcription to ensure confidentiality.

Focus Groups
Focus groups were used to facilitate this descriptive inquiry because they offered a resource-efficient approach for collecting a range of perceptions from uniquely knowledgeable and experienced participants (Krueger & Casey, 2015; Sandelowski, 2000). Focus groups were conducted within each institution given the differences between each doctoral program and to leverage the existing familiarity between participants and facilitators, which may promote a comfortable environment for discussion and self-disclosure (Krueger & Casey, 2015).

Three focus groups were conducted at each educational institution. Each focus group included two to five graduates from the institution and a faculty facilitator, who also was the doctoral capstone coordinator of the graduates' respective institutions. Participants were assigned to focus groups based on their availability.

Focus groups were conducted virtually in Zoom. Audio was recorded and transcribed with Amazon Web Services automatic speech recognition technology integrated in Zoom. Focus groups lasted between 45 and 65 minutes. The facilitators used the focus group guide to gather consistent input and probed for additional information and clarification through semi-structured prompts in the interview guide.

Data Explication
The research team reviewed, corrected, and de-identified the focus group transcriptions. Following verification of transcripts, the research team deleted the audio recordings.

The research team completed an inductive thematic analysis manually in Microsoft Word according to Nowell et al.'s (2017) six phases for trustworthiness: (1) familiarize yourself with your data, (2) generate initial codes, (3) search for themes, (4) review themes, (5) define and name themes, and (6) produce the report. Regarding member checking, two participants, each from a different program, provided feedback and concurred on the themes identified. Through the process of thematic analysis, several stages of reviewing raw data, debriefing, triangulation, and consensus occurred to identify the final themes described.

Iterative coding was completed through a series of four meetings over four months. The initial meeting discussed the individual codes discovered within each institution's data. Names and definitions were established for common codes through comparison of codes. During the coding process, special attention was paid to whether or not codes appeared at each institution or were program-specific. Codes were similar despite programmatic differences; therefore, quotations used throughout this document are representative of all institutions. For example, one institution had a quotation about experience gained creating deliverables, and another institution had quotations about professional posters and presentations which were initially both placed under the code *deliverables*. Upon discussion, it was decided that the quotations for professional posters and presentations were referring to *dissemination skills* and the quotations on deliverables were discussing *self-directed learning* in that students were able to produce these products on their own, thus each moving to a different code rather than staying together as *deliverables*. The next step at the second meeting was to collapse the 27 codes, yielding eight categories. After this meeting, each researcher re-examined individual quotations and recoded to the established defined categories. At the third meeting, category definitions were revisited, and subthemes rearranged. For example, time management was initially placed as a subtheme in self-directed learning, but upon re-examining individual quotations, was moved to *professional skills*, combined with *flexibility,* and renamed *personal responsibility*. See Table 1 for an example of the coding process. The eight initial categories were examined to determine overlap and further collapsed to the final four themes. The codes of barriers and disadvantages were combined and tracked in a category for reporting. The next two meetings were to create the concept map, select the quotations used as exemplars and to refine the theme names. Each institution suggested 1-2 quotations for use for each theme, and through discussion, consensus was reached.

Table 1

Sample Coding Process

| Code	Initial theme	Final Subtheme	Final theme
Use of evidence in practice	Research skills	Evidence in Practice	Professional Skills
Understand literature	Research skills	Evidence in Practice	Professional Skills
Opening Doors	Opportunity	Opened Doors	Impacts on Future Practice
Try something different	Opportunity	Opened Doors	Impacts on Future Practice
Time management	Self-Directed Learning	Personal Responsibility	Professional Skills
Flexibility	Professional skills	Personal Responsibility	Professional Skills

Positionality Statement

The first three authors were graduates of either entry-level or post-professional OTD programs, and each completed a culminating doctoral capstone as part of their degree requirements. They also were capstone coordinators for the graduates who participated in the study, and all three believed the capstone is a valuable component of entry level OTD education which influenced the creation of the study. Additional beliefs held by the authors that may have influenced data interpretation include the importance of the mentoring relationship and the value of self-directed learning. The influences of these beliefs are seen in the questions created for use in the focus group interview guide. During the focus groups, authors encouraged the participants to be candid, yet professional relationships with the participants may have affected candor. Most participants discussed both the perceived positive and/or negative outcomes of their experiences with minimal prompting. As the research team transcribed and coded the recordings, they engaged in reflective practice techniques, including discussion with one another and individual reflection on the words the participants used. These practices enabled each author to understand their unique capstone design better, as well as identify individual biases regarding the design of each program's capstone process to set aside biases during data analysis.

Results

Twenty-one graduates participated in this study, yielding an enrollment rate of 10.5%. Four major themes were identified in which participants reported as positive aspects of the doctoral capstone experience and project: (1) *Becoming a Professional: Recognition of Professional Skill Development, (2) Finding Employment: Impacts on Career Trajectory,* (3) *Becoming a Life-long Learner: Self-directed Learning,* and (4) *Shifting from Student to Professional: Impacts of Mentorship.* Participants also discussed *barriers and disadvantages* of the doctoral capstone, which were coded and are reported here. Figure 1 provides a concept map of the themes and subthemes that showcase the perceived value of the doctoral capstone in the occupational therapy profession.

Figure 1

Concept Map of Themes
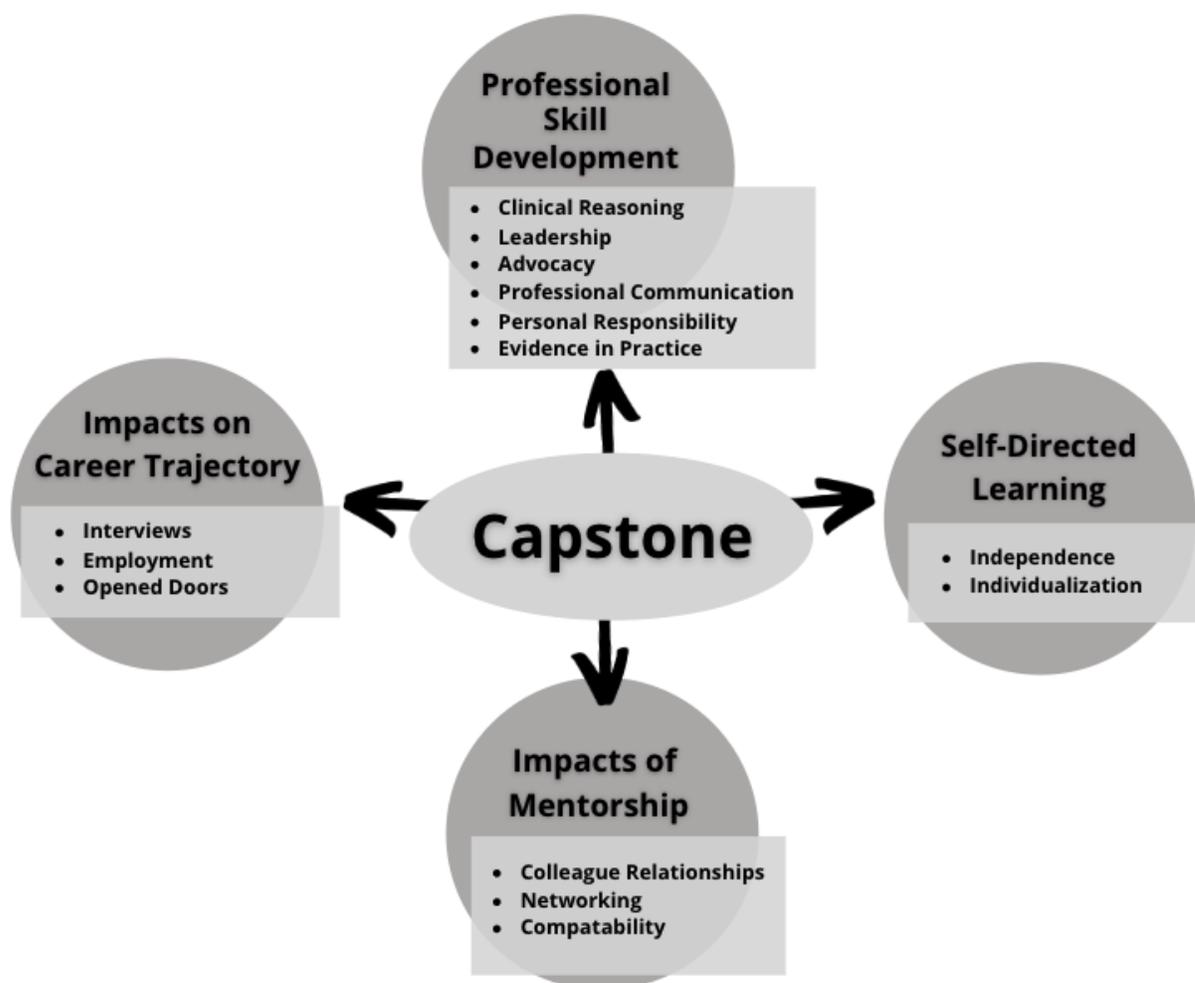
Becoming a Professional: Recognition of Professional Skill Development
This theme identified professional skills that were developed or strengthened through engagement in the doctoral capstone. These skills contributed to becoming a professional as well as serving as representatives for the profession. Several skills were identified by participants as valuable lessons in their growth as professionals including use of *Evidence in practice, In-depth knowledge*, *Advocacy for occupational therapy*, *Professional communication*, *Personal responsibility*, and *Leadership skills*. Participants' comments revealed that enhancing these skills enabled them to not only see the connections between skills but also how the skills are integral to becoming professionals. While program design influenced which subtheme was strongest at each institution, the overall theme of *Becoming a Professional* was the most robust and well-supported theme across all three programs.

Evidence in practice was identified in all three programs but was strongest in the program that emphasized implementation science in its capstone design. This subtheme was coded when students discussed using evidence to improve their practice, and how that increased their understanding of research, thus supporting and justifying clinical practice. Although not a new concept to the students, the ability to apply evidence in a practical way increased their overall professional clinical skills.

> "I understood research and I feel comfortable telling employers that I'm able to read literature and implement evidence in treatment." (Participant 1a)

> "So I also had to do some research for that and try to find guidelines for it or justify what we were doing medically that it was appropriate and safe. So that was new skill set, applying it within practice." (Participant 8b)

> "…learned a lot about having reasons to back up why you're doing things and finding that true underlying reason." (Participant 5c)

In-depth knowledge revealed an increased passion for and knowledge of a topic, an opportunity for continued in-depth clinical skill development, and refinement of clinical reasoning skills. This subtheme was named in alignment with ACOTE terminology and demonstrated that graduates generally thought they were gaining additional in-depth knowledge beyond fieldwork and traditional coursework.

> "And so I feel like the doctoral capstone really provides the opportunity for people to explore some kind of agenda, like [Participant 4a] was saying, that we, like a little niche area, or something we're not going to traditionally do like our first couple years after graduation and just explore a different field or different setting an area of OT and just kind of branch out with your interests and explore those." (Participant 7a)

> "Learning how to apply and implement the skills that I learned in terms of deepening and really diving and peeling back layers." (Participant 9c)

Advocacy for OT was also a strong subtheme across all three programs. Several graduates commented that they had opportunities to both highlight the profession and advocate for services for clients and populations.

> " ...the biggest thing for my placement [was] advocating for occupational therapy and getting the practice of not only explaining what we do, but also just the importance of it." (Participant 5a)

> "I learned to be an advocate and to have the confidence to speak of my knowledge and my expertise." (Participant 4b)

Professional communication was a subtheme in which participants identified that they developed additional communication skills with professionals both within and outside of occupational therapy. In some instances, professional communication occurred across cultures with a variety of stakeholders, resulting in a better understanding of the overall impact of culture on communication.

> "You have a lot of that professionalism that responsibility that kind of falls to you. And so I'm really trying to step up to make sure that not only was I representing the school very well, but I was also representing the profession." (Participant 2b)

> "And the fact that most clinicians that are in that setting they are not [redacted] or not Native American, so there is a little bit of a hesitancy with some patients, makes trust building and rapport building even more difficult and that's on a spectrum too, you can't just lump every person that's [redacted] together." (Participant 8c)

Personal responsibility included topics such as developing better time and project management skills, becoming more flexible, and being responsible for self. These are professional skills that new practitioners develop in their first years of practice as they manage their own caseload and job responsibilities.

> "So it was a great transition point though, too, because I do like right now. Like, you know, I'm not meeting checkboxes at work. Like, I know what is expected of me and I know how to do it. So I think it was a good transition experience as well because you really learn how to be autonomous trusting yourself getting things done because you know what you had to do to graduate." (Participant 4a)

> "to have the confidence and the, I guess self-assuredness to be able to reapproach that situation with a different perspective and different attitude, I think, was really important." (Participant 2b)

Leadership skills was identified when students assumed a leadership role in the capstone setting or during and after their doctoral capstones within their focus topics.

"I feel like you kind of are, you develop a leadership role too. Because, you know, people turn to you and so they will look to you to be that leader in your experience." (Participant 10a)

"I feel like I'm groomed to be able to immerse myself in a leadership role, which I value a lot." (Participant 1c)

Finding Employment: Impacts on Career Trajectory
This second major theme consisted of discussions on how the doctoral capstone impacted *Employment* and *Marketability,* and *Opened doors for future opportunities*. Participants' comments revealed additional benefits of the capstone including transferable skills to future jobs and settings as well as skills needed during the job hunt such as how to market themselves and network.

Regarding the first subtheme of *Employment.* Several participants stated they were specifically hired at their current place of employment due to the capstone experience.

"I was hired in this job that I have now specifically for the skills that I was building on in my capstone. So at least half of my role currently is doing project development, doing presentations, mentoring other clinicians." (Participant 3c)

Marketability was coded when participants reported they were chosen for an interview due to a skill acquired during capstone and reported on their resume, or that they discussed skills gained on their capstone during an interview.

"It enabled me to really sell myself when I was interviewing for positions, and it made my name stand out….because of my experience in aquatics, so that specialty area and that kind of unique thing really enabled me to set myself apart." (Participant 11a)

The final subtheme focused on *Opening doors for future opportunities.* This was indicated when a student discussed how the skills gained in the capstone would benefit them in their career trajectory. This included areas such as management, program development, research, and teaching.

"I think my experience was really important for helping me find my goal for the three to five years down the road thing." (Participant 8a)

"My current employer was very interested in me based on my capstone experience that was really our initial interview and conversation was a lot about my capstone and her interest in me as an OT, and her practice was being able to use some of those skills that I had, bringing those to clinical practice and adding just overall to some of the diversity of what other therapists have experienced." (Participant 5b)

Becoming a Life-long Learner: Self-directed Learning
The third theme was the self-directed, *Independent* nature of the doctoral capstone experience and project, which provided an opportunity for *Individualized* focused learning of a topic of interest. Lifelong learning is a tenet of continuing professional development which requires individual practitioners to set their own goals for learning and attain them independently (AOTA, 2017). This process was reinforced during the doctoral capstone in all three programs.

Some graduates saw the *Independent* nature of the capstone as challenging: the broad structure and variety of topics made it difficult for them to choose their area of focus and project. However, most graduates reported the positive aspects of self-directed learning in relation to setting their own goals and focusing on areas of practice to enhance their careers as evidenced in these quotations:

> "I really enjoyed getting to kind of set goals for myself and then be self-directed and advocate for myself to meet those objectives with my mentor." (Participant 5b)

> "Allows you to be creative and reflect on what it is you want in your career and how to get there and what it is you need." (Participant 9c)

Shifting from Student to Professional: Impacts of Mentorship
The fourth theme included mentor relationship components focused on a *Colleague style relationship*, *Networking*, and *Compatibility with mentors* during the capstone. Many conversations focused on how the mentor relationship was different from the supervisory relationship encountered during Level II fieldwork. The mentor relationship felt more collegial and collaborative where the student is viewed as a peer or colleague, similar to what they anticipate experiencing as a professional. This theme was identified in quotations focused on the impacts the mentee and mentor relationships had on the student and capstone as a whole as they neared graduation.

> "I think that it was a different relationship compared to your fieldwork rotation. I just felt like more like an equal and a colleague, which I really appreciate it from the whole experience." (Participant 1a)

> "Building strong mentor-mentee relationships also has been a huge factor in where I am currently because even now, I'm able to pursue continued research… research projects with mentor and then just have built longevity into my Capstone that has really benefited me as a new practitioner." (Participant 4b)

> "Mutual trust and mutual respect." (Participant 1c)

> "Mentor communication was very reciprocal." (Participant 4c)

Barriers and Disadvantages
Questions eight and nine of the focus group instrument asked participants to share their perceptions of barriers and disadvantages to the capstone experience and project. Participant responses to these questions were collapsed into four categories: *COVID-19 pandemic, understanding of capstone, length of program,* and *no barriers or disadvantages.* One unique barrier for this cohort of graduates were challenges experienced due to the *COVID-19 pandemic.* Many clinical experiences were canceled, delayed, or moved to completely remote experiences. Some experienced these challenges in the last few weeks of their capstone experience, leaving them with a lack of closure as they neared graduation. Participants' perceptions of this barrier can be seen through this quotation: "For me, this is kind of a little specific…because COVID and everything was happening, I wasn't able to do my final functional cognition presentation to the site. So kind of taking away, I felt like if you didn't kind of have that wrapping up piece,…but I almost felt like, I didn't get that finishing touch" (Participant 13a).

Another barrier identified was the *Understanding of capstone* both inside and outside the field of occupational therapy, which often required students to explain the capstone to their sites and stakeholders numerous times. Participants' perceptions of this barrier are illustrated with: "Explaining what it is to the site. That's probably the biggest one" (Participant 5a); "Lack of knowledge of what capstone is and what it can look like" (Participant 11c).

Several participants identified the *Length of program* as the main disadvantage of the doctoral capstone as it adds additional time after Level II fieldwork. This category included comments about burnout, loss of motivation, financial troubles, and readiness to be done with school. Participants' perceptions of this disadvantage can be seen here: "One of the places where I was at fieldwork was hiring, and they, multiple people asked me, like, why aren't you applying or why aren't you doing that, you should do it. And, my, my fieldwork educator goes 'she can't. she's getting her doctorate'….so I kind of lost out on that opportunity" (Participant 12a); "Just wanting to be paid, really" (Participant 1a).

Several participants did not identify *barriers or disadvantages* to the doctoral capstone. Participants felt the benefits were so great that they could not see the disadvantages. "I don't really know if there's any disadvantages. I mean, there's definitely advantages I can think of off the top of my head" (Participant 2a).

Discussion
The authors of this focus group study found richness to support the value and usefulness of the doctoral capstone in four thematic areas (1) *Becoming a Professional: Recognition of Professional Skill Development*, (2) *Finding Employment: Impacts on Career Trajectory*, (3) *Becoming a Life-long Learner: Self-directed Learning*, and (4) *Shifting from Student to Professional: Impacts of Mentorship*. This study provides

additional details that support the perception that capstone students gain valuable and useful skills that facilitate the transition from student to professional. As the final component of doctoral education, the experiential learning approach of the doctoral capstone may be key to support this transition.

This study suggests that *professional skill development* was one of the most valued aspects of the doctoral capstone. One skill identified was the ability to use evidence in practice, which was also found by Smallfield and colleagues (2019) and suggested as a potential benefit of doctoral education by Case-Smith and colleagues (2014) and Brown and colleagues (2015). While the OTD is an entry level degree, the capstone structure of using current literature to create and implement a project outside the classroom is similar to the capstone process in the post professional Doctor of Nursing Practice (DNP) program. Linking scholarly projects to clinical sites via a capstone may facilitate quicker implementation of evidence to practice and encourage the sustainability of doctoral capstone projects, similar to what is suggested in other allied health professions (Barlow et al., 2018; Miley & Reinish, 2016; Riner, 2015).

Challenging students to actively engage in their learning (Ash & Clayton, 2009) and to embrace life-long learning as an important professional skill. S*elf-directed learning,* a key piece of being a life-long learner, supports the transition to practice and is a cornerstone of the doctoral capstone. The doctoral capstone provides the students with the opportunity to critically reflect on and assess practice, which has been identified as a key step in the transition from student to independent practitioner (Nicola-Richmond et al., 2016). As a final steppingstone, the doctoral capstone provides an independent, self-directed, experiential learning opportunity to demonstrate a synthesis and application of knowledge gained (ACOTE, 2018). Loeng (2020) found that in self-directed learning, students take initiative for their learning, individualize goal development, and choose appropriate learning strategies and outcomes, all of which are consistent with findings from the present study.

Mentors can help students achieve their individualized objectives by modeling their own learning achievements and providing both guidance and opportunities throughout the doctoral capstone. *Mentoring* and mentorship is a complex relationship that involves a balance of compatibility, interpersonal skills, experience, and networking to help students connect their capstone to their professional careers. Participant reflections in this study support the importance of the mentor/mentee relationship and its positive impact on the doctoral capstone. The colleague relationship of mentor and mentee requires relational mentoring to retain a high level of quality, learning, and development within the context of an occupational therapy capstone student's career (Raggins, 2012). Mentors have an impact on the perceived success of the relationship and skill development of capstone students; therefore, creating resources for mentors and mentor development is crucial (Fleming et al., 2013; Mikkonen, et al., 2020) as is continuing to educate current clinicians about the capstone. In addition, occupational therapists who serve as mentors increase their own leadership skills, thus providing another reason to support the development and education of future mentors (Stoffel et al., 2014).

The *impacts on career trajectory*, as perceived by the study participants, opened up opportunities as they transitioned into their professional practice careers. The skills developed as part of the capstone may increase graduates' marketability and afford them a variety of employment opportunities outside of traditional clinical practice. This result may provide further insight into Smallfield et al.'s (2019) finding that OTD graduates were more likely to conduct research and become educators. Graduates also reported learning to better advocate for occupational therapy through the opportunities presented in their doctoral capstones, which also supports earlier findings (Recigno et al., 2020).

The findings were overwhelmingly positive regarding the perceived value of a doctoral capstone, adding to the development of the student's skills and their transformation to professional. However, an acknowledgement of the *barriers and disadvantages* is essential in considering the doctoral capstone. The most frequently cited disadvantage was the extra semester(s) required to complete the curriculum. Program length contributed to feelings of burnout and tension stemming from a general readiness to enter the workforce following Level II Fieldwork. A limited understanding of the capstone by mentors was another barrier identified by participants in this study that has been discussed previously in the literature (Stephenson et al., 2020). This limited understanding supports the continued need for education both within and outside of occupational therapy regarding the definition and scope of the capstone. This lack of understanding may lead to students being challenged to successfully implement their objectives. It is also important to note that some graduates did not identify any disadvantages to the doctoral capstone, suggesting that the benefits may outweigh the possible disadvantages.

The occupational therapy doctoral capstone appears to facilitate the development of a robust professional skill set as students transition into professional practice. While the move to entry-level doctoral education has been fraught with uncertainty, the results of this study appear to support some of the reasons the doctorate was initially proposed (Brown et al., 2015; Case-Smith et al., 2014).

Limitations
This study was conducted by three different programs and program designs in the Midwest and Southwest. Additional models for the doctoral capstone are not represented but could impact the overall themes drawn from this study. Since the sample was a self-selected convenience sample, graduates who had negative experiences or did not find the capstone to be valuable may not have enrolled. Having the capstone coordinator facilitate the focus group from the same program as the graduates can be a limitation. Potential confirmation bias of the authors is discussed in the positionality statement related to past experiences with the doctoral capstone as both students and coordinators.

Implications for Occupational Therapy Education

This study highlights the value and usefulness, as well as the barriers and disadvantages, of the doctoral capstone as perceived by recent graduates. Doctoral programs may consider these themes when creating or updating their capstone curriculum. Barriers including poor understanding of the capstone could be addressed by educating capstone site mentors regarding both mentor resources and the capstone itself. Students need to be aware of the disadvantages of program length and balance that with the advantages gained by completion of the capstone. Advantages appear to outweigh the disadvantages as reported by recent graduates. Implications for the profession include increasing evidence-based practice through doctoral capstone projects in cooperation between clinical/community sites and students/academia. Future research could investigate whether or not these identified perceptions are consistent across the wide variety of program designs and institutions throughout the country.

Conclusion

One of the most often discussed reasons to move to a doctorate for entry-level education has been to further the development of both the individual clinician and the profession at large. This study supports the doctoral capstone as a scholarly practice-based project that adds value to the individual's perception of their professional development. As the number of entry-level OTD programs continues to rise, we must perform and disseminate research surrounding all aspects of the doctoral capstone and create supports for both students and practitioners in the process. This multi-institutional, multi-regional qualitative inquiry provides initial evidence of the perceived value and utility of a doctoral capstone to solidify students' professional skills and relationships and enhance their marketability.

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