



# A Quality Assurance Study on the Doctor of Occupational Therapy Program's Capstone: Perceptions of the Advanced Experience by Program Graduates

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## Abstract

**Objective:** The purpose of this quality assurance (QA) study was to investigate the University of Mississippi Medical Center's (UMMC) first graduating cohort from their Doctor of Occupational Therapy (OTD) program. Perceptions of the capstone experience were examined to determine if the students felt adequately prepared for their capstone placements and perceived the overall purpose of their capstone was met (i.e., in-depth exposure for advanced skill development).

**Method:** This study utilized an electronic survey to collect data from OTD graduates. Study data were collected and managed using REDCap electronic data capture tools hosted at UMMC.

**Results:** A large majority of respondents reported that the preparatory methods in place were effective in preparing them for their experience. Specifically, communication with key leaders, forms, assignments, and specific courses within the program have the explicit purpose of preparing students for capstone, and according to the student responses, these aspects adequately prepared them for their experience. Regarding advanced skill development, student responses revealed their overall confidence as well as their individual subskills increased following the completion of capstone.

**Conclusion:** This study suggests that the overall purpose of the capstone experience was met, and students felt adequately prepared. However, results should be interpreted with caution since there has only been a single cohort of graduates. Future QA research can provide further exploration into the capstone preparation and experience.

## Introduction

Within the field of health professions, the key to finding a connection between academic success and clinical competency is fundamental. One way this is accomplished is through what many educational programs call the capstone experience.

In 2007, ACOTE standards were updated to include section B.11.0 which specifically mentions the "doctoral-level experimental component" for which we now know to be the "capstone experience" (ACOTE, 2007, 2018). According to ACOTE, the capstone encompasses two parts: the experience and the project. The experience refers to the immersion into their specific facility, and the project refers to the significant contribution the student will leave behind for the site.

UMMC's OTD program has their own unique capstone system which includes designated coursework to prepare students for their capstone experiences. Each student is assigned to a distinct area, known as a trek, which may or may not be a clinical setting. The trek options include clinical specialty, community health, research/ education, and administration/ leadership.

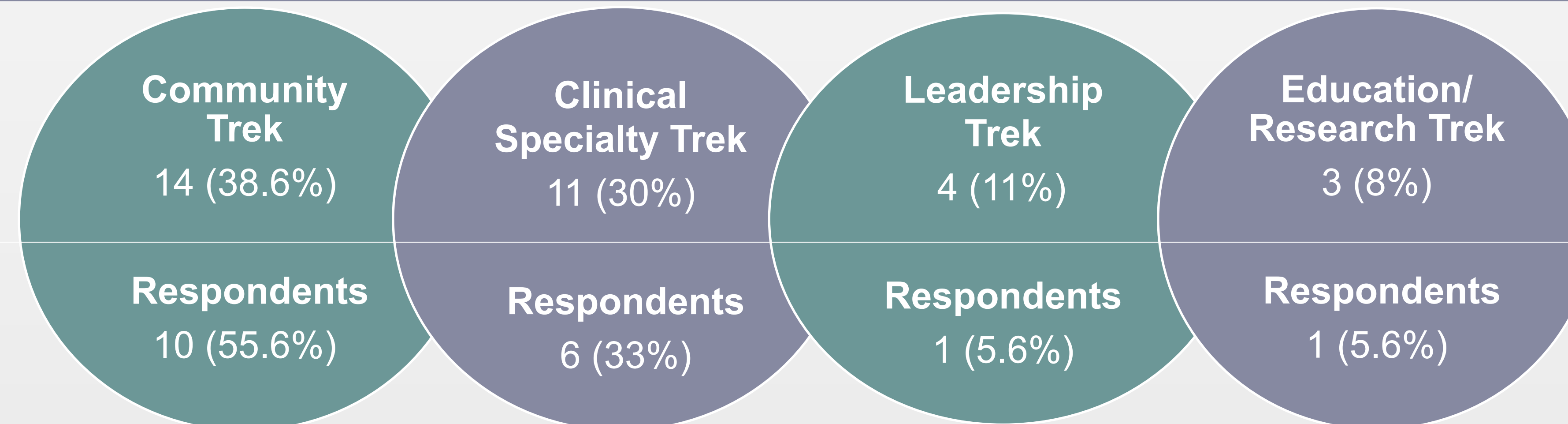
Several studies in the literature revealed both positive and negative aspects regarding the capstone experience. For instance, personal skill development, increased confidence, improved communication, and critical thinking were some of the positive outcomes, while receiving necessary and timely knowledge from their mentors, site supervisor, and faculty were some of the challenges. This is important as the literature finds that all aspects are crucial to the overall experience.

## Primary Aims

- Primary Aim 1:** To determine the perceptions of graduates on how well they were prepared by the program to enter the capstone site.
- Primary Aim 2:** To assess the perceived role that select OTD courses had in preparing the capstone student for their individualized capstone experience.
- Primary Aim 3:** To assess the OTD graduate's perceptions on their professional development toward the acquisition of advanced skills as graduates from a doctoral level occupational therapy program (e.g., leadership, research, problem solving, critical thinking, knowledge base, etc.).

## Results

### Representative Participation of Capstone Treks by Placements (n= 32) and Respondents (n= 18)



### Student Perceived Effectiveness of Capstone Preparatory Activities

	Very Effective n (%)	Somewhat Effective n (%)	Somewhat Ineffective n (%)	Not Effective n (%)
<b>Individual Meetings with Key Capstone Leaders</b>				
Capstone Coordinator	9 (50.0)	8 (44.4)	1 (5.6)	0 (0.0)
Capstone Mentor	8 (44.4)	9 (50.0)	1 (5.6)	0 (0.0)
Capstone Project Advisor	8 (44.4)	9 (50.0)	1 (5.6)	0 (0.0)
<b>Capstone Specific Courses</b>				
Capstone Seminar	5 (27.8)	12 (66.7)	1 (5.6)	0 (0.0)
Advanced Experiential Learning Seminar	4 (22.2)	11 (61.1)	3 (16.7)	0 (0.0)
<b>Capstone Preparatory Forms</b>				
Trek Preference Form	9 (50.0)	7 (38.9)	2 (11.1)	0 (0.0)
Capstone Site Data Form	3 (16.7)	13 (72.2)	2 (11.1)	0 (0.0)
<b>Capstone Assignments</b>				
Phase I Literature Review	5 (27.8)	7 (38.9)	3 (16.7)	3 (16.7)
Capstone Project Plan	6 (33.3)	10 (55.6)	1 (5.6)	1 (5.6)

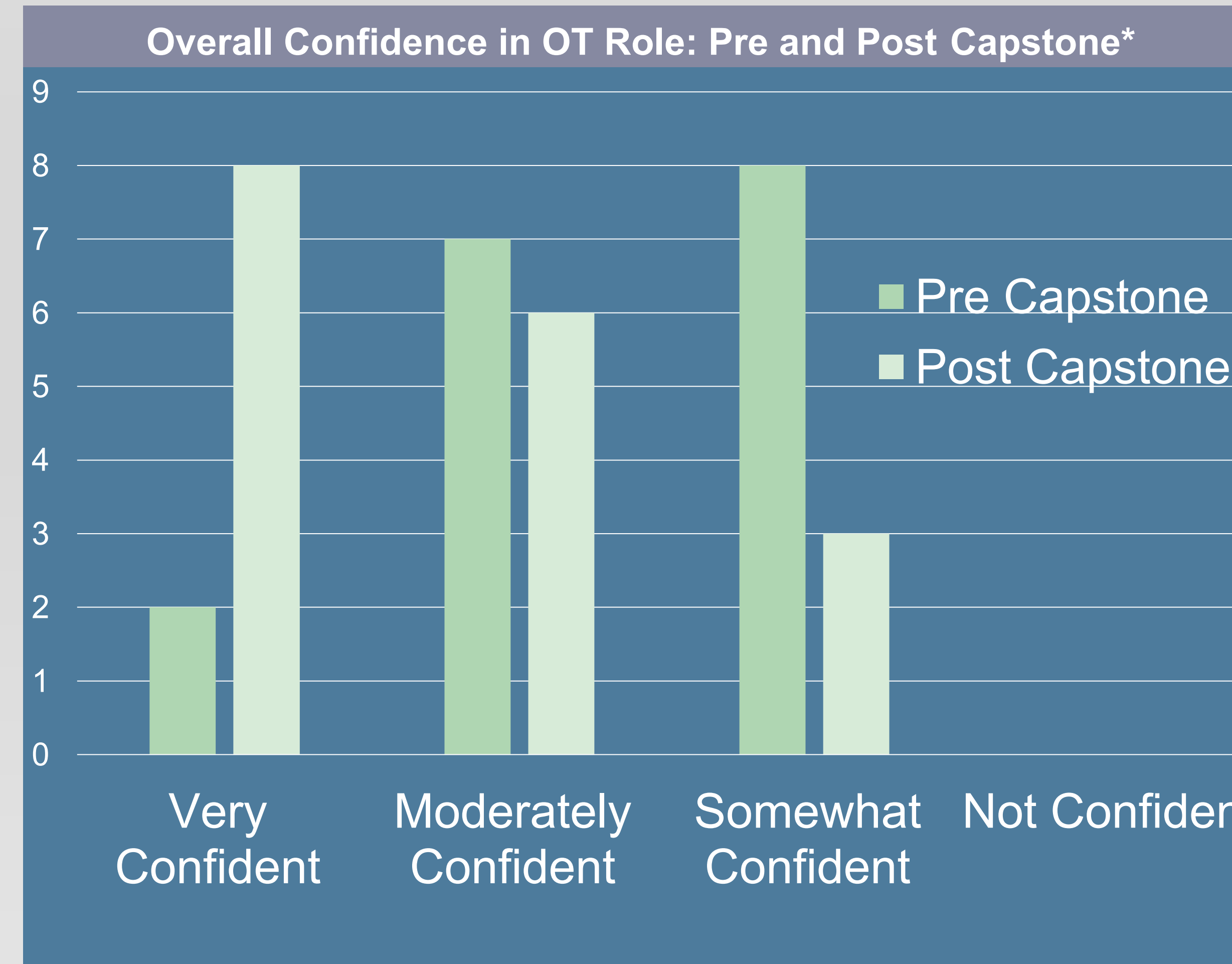
### Students' Perceived Confidence in Individual Skills Post Capstone

	Much More Confident	Somewhat More Confident	About the Same Confidence	Less Confidence	N/A** n(%)
Taking Initiative	12 (70.6)	5 (29.4)	0 (0.0)	0 (0.0)	0 (0.0)
Advocacy Skills	11 (64.7)	6 (35.3)	0 (0.0)	0 (0.0)	0 (0.0)
Collaboration with Leaders	11 (64.7)	2 (11.8)	4 (23.5)	0 (0.0)	0 (0.0)
Therapeutic Use of Self	10 (58.8)	3 (17.6)	3 (17.6)	0 (0.0)	1 (5.9)
Educational Skills	9 (52.9)	4 (23.5)	3 (17.6)	0 (0.0)	1 (5.9)
Workplace Leadership Skills	9 (52.9)	5 (29.4)	3 (17.6)	0 (0.0)	0 (0.0)
Program Development/Improvement	8 (47.1)	5 (29.4)	4 (23.5)	0 (0.0)	0 (0.0)
Interprofessional Collaboration	8 (47.1)	6 (35.3)	3 (17.6)	0 (0.0)	0 (0.0)
Applied Clinical Reasoning	7 (41.2)	4 (23.5)	2 (11.8)	2 (11.8)	2 (11.8)
Balancing Work/Project Skills	7 (41.2)	7 (41.2)	3 (17.6)	0 (0.0)	0 (0.0)
Administrative Skills	6 (35.3)	2 (11.8)	8 (47.1)	0 (0.0)	1 (5.9)
Clinical Skills	5 (29.4)	4 (23.5)	6 (35.3)	0 (0.0)	2 (11.8)
Conflict Resolution	5 (29.4)	5 (29.4)	7 (41.2)	0 (0.0)	0 (0.0)
Research Skills	5 (29.4)	7 (41.2)	6 (35.3)	0 (0.0)	0 (0.0)
Applying Legal/Ethical Principles	4 (23.5)	3 (17.6)	8 (47.1)	0 (0.0)	2 (11.8)
Policy Development	4 (23.5)	1 (5.9)	7 (41.2)	1 (5.9)	4 (23.5)
Evidence-Based Practice	3 (17.6)	10 (58.8)	1 (5.9)	2 (11.8)	1 (5.9)
Theory Use and Application	2 (11.8)	4 (23.5)	9 (52.9)	0 (0.0)	2 (11.8)
Theory Development	1 (5.9)	3 (17.6)	8 (47.1)	1 (5.9)	4 (23.5)

### Perceived Helpfulness of Select OTD Courses for Capstone\*

Selected Courses*	Very Helpful n (%)	Somewhat Helpful n (%)	Not Helpful n (%)	Not Applicable n (%)
Pediatrics	8 (47.1)	3 (17.6)	0 (0)	6 (35.3)
Community Health & Wellness	8 (47.1)	5 (29.4)	1 (5.9)	3 (17.6)
Psychiatric/Psychosocial	8 (47.1)	6 (35.3)	0 (0)	3 (17.6)
Case Based Clinical Reasoning	6 (35.3)	6 (35.3)	1 (5.9)	4 (23.5)
Research	6 (35.3)	7 (41.2)	0 (0)	4 (23.5)
Research Project	6 (35.3)	7 (41.2)	0 (0)	4 (23.5)
Management	6 (35.3)	8 (47.1)	0 (0)	3 (17.6)
Adult/Older Adult	5 (29.4)	5 (29.4)	0 (0)	7 (41.2)
Assistive Technology	5 (29.4)	7 (41.2)	0 (0)	5 (29.4)
Orthopedic Principles	5 (29.4)	4 (23.5)	0 (0)	8 (47.1)
Specialty Interventions	5 (29.4)	6 (35.3)	0 (0)	6 (35.3)
Orthosis and PAMS	4 (23.5)	1 (5.9)	0 (0)	12 (70.6)
Neurological Principles	3 (17.6)	7 (41.2)	0 (0)	7 (41.2)

\* Survey questions grouped selected courses for student feedback.



\* Confidence wording was merged for graph (i.e., Very Confident and Much More Confident)

## Methodology

**Research Design:** This QA study utilized an electronic survey to collect data from the first cohort of OTD graduates of UMMC. As a QA project, IRB submission was not required per the self-certification form.

**Study Participants:** A total of 32 graduates of UMMC were invited to participate in the electronic survey. There were 18 respondents that accepted and completed the survey for a response rate of 56.25%.

**Data Collection:** The researchers designed an electronic survey specific to their research objectives and the literature review. The researchers also gleaned useful survey development insight from completed Student Evaluation of Capstone Experience forms. Though the data collection instrument was not tested for reliability or validity, a draft survey was reviewed by the UMMC capstone coordinator, and the feedback was utilized. The final survey consisted of fifty-two questions which were Likert scale as well a few open-ended questions to gather additional narrative data.

**Data Analysis:** Study data were collected and managed using REDCap electronic data capture tools. A data analysis of the survey provided frequencies and percentages to address the study's primary aims. In addition, researchers examined qualitative data to support the quantitative findings.

## Implications for OT

- The UMMC preparatory meetings, forms and assignments were all perceived as positive methods to effectively prepare students for entry into the capstone experience. However, feedback on the Phase I Literature Review offered an opportunity for a deeper analysis to determine if the assignment details and timeline could be enhanced by the program.
- Overall, student feedback revealed positive perceptions regarding individual courses and capstone implications. Further research is needed to correlate how students felt individual courses prepared them for their specific capstone trek.
- Since findings revealed positive perceptions for advanced skill development, this supports that the OTD program is addressing both the ACOTE standards and program goals.

## Limitations

- Small sample size due to only one graduating cohort
- Non-response bias due to limited number of respondents
- Recall bias due to delay between graduation and survey dispersal
- Lack of reliability and validity on the survey instrument
- Covid-19's impact on the program's capstone design and timeline

## Conclusion

Overall, the results from this QA project suggest that the ACOTE standards and program goals are being addressed by the OTD program. However, results must be interpreted with caution with just over half of the first cohort responding. The program should continue to monitor feedback from students as additional cohorts graduate as well as explore outcomes from other sources (e.g., capstone coordinator, capstone mentors, and faculty capstone advisors). In addition, capstone experiences are highly individualized and are grouped by four treks. To understand preparatory tasks and capstone outcomes in a more meaningful way, future QA projects could delve into a deeper analysis by trek. Yet, the number of students assigned to the varying treks will be a consideration to provide a sample across the four treks that are adequate to provide useful trends and overall outcomes.

Additional references available upon request