



Developing a Grant for Implementation of a Sensory Station and Trolley to Promote Learning Outcomes by Utilization of Active Learning Strategies for Occupational Therapy Assistant Students

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OVERVIEW OF CAPSTONE SITE

Holmes Community College, located in Ridgeland, is home to one of four occupational therapy assistant (OTA) programs in the state of Mississippi. There is a range in the student demographics, with a majority being female between the ages of twenty and forty. The Class of 2021 had 16 students, while the class of 2022 has 11 students. There are two faculty members, the program director and fieldwork coordinator, that teach all OTA curriculum and advise students as well.

NEEDS ASSESSMENT

Initial Meeting: June 23, 2020- Seven open-ended questions were used to discuss student demographics and roles and responsibilities of the capstone student with the capstone mentor. A list of possible capstone projects was created to rank at the follow-up meeting to determine a best fit project. These projects were: a method of storing student information, write/submit for approval a grant proposal to incorporate sensory materials into the classroom, and create hands-on assignments for courses.

Follow-Up Meeting: July 8, 2020- The possible project ideas were ranked, and a grant to fund a sensory station and trolley was finalized by the capstone mentor and student. Daily roles were also discussed more in detail, as storage for student information and creating assignments were included in those responsibilities.

LITERATURE SUMMARY

Active Learning Overview: Active learning, which is defined by many as learning by doing, is a signature pedagogy and incorporates the knowledge and beliefs of a profession. It increases self-efficacy as well as improves clinical reasoning skills and increases student engagement. A more engaged student can lead to improved performance and knowledge retention. Curriculum design plays a large role in pedagogy and student engagement. Selected OT theories, such as sensory integration, are a natural fit for active learning opportunities.

Inclusion of Sensory Integration into OT education: Sensory integration (SI) is the way the brain processes and organizes incoming environmental sensations. It is the most widely used guiding theory in pediatrics. There is strong evidence supporting its use for improving occupational skills, like play and language. Most OT professionals are not equipped with adequate information on properly using SI techniques, so early exposure for OT students is integral in closing that gap. Implementing a sensory station and trolley will allow Holmes to provide education on this theory that coincides with active learning strategies.

PROJECT GOALS

Goal 1: Compile a summary report utilizing available evidence on the use of sensory carts as an OT intervention and/or teaching tool by the end of week 3.

Goal 2: Examine the curriculum to identify how the sensory cart could best be integrated into the curriculum (i.e., courses, uses, etc.) by the end of week 10.

Goal 3: Select and prepare a grant proposal focusing on addition of a sensory cart to facilitate interactive student learning at the capstone site by the end of the capstone experience (i.e., week 14).



PROJECT DEVELOPMENT

Project Development Timeline

Weeks 1-3	
Began the search for possible grants to meet capstone project objectives	
Familiarized self with hands-on learning items in classroom	
⇓	
Weeks 4-7	
Selected Holmes Community College Development Foundation Grant	
Collected information for grant application requirements	
⇓	
Weeks 7-9	
Continued collection and compilation of grant application	
Conversed with Capstone project advisor and mentor for providing feedback on grant application, as well as making needed edits	
⇓	
Weeks 10-12	
Completed multiple rounds of data gathering/revisions for grant application	
Ongoing conversations with capstone project advisor and mentor for feedback	
Developed course objectives for Pediatrics and Skills courses (Grant Appendix B)	
⇓	
Weeks 13-14	
Attended a Big Blue Button meeting to discuss progress and questions/concerns of Capstone project	
Edited course syllabi for Pediatrics and Skills courses	
Finalized edits on 31-page grant application	

Grant Proposal

Strategic Initiative: Holmes Community College Occupational Therapy Assistant Technology (OTA) program will be supported by this proposed project to promote in-class learning for improved outcomes on class assessments and exams, as well as the NBCOT certification exam. Use of the knowledge gained within the community will also improve the outcomes of future patients.

Submission and Implementation Procedures: During the Fall of 2021, the grant proposal will be submitted to the Development Foundation board and will be reviewed for approval. If funds are awarded, the capstone mentor and other faculty members will begin purchasing items with the budget. During Spring of 2022, the capstone mentor and next capstone student will add learning objectives to the courses and will begin planning the application of the sensory station and trolley. Fall 2022 and Spring 2023 will be the first semesters of the application of the sensory station and trolley. Students will be given the pre- and post-tests and will be able to utilize the sensory items during designated class meetings.

PLAN FOR PROJECT EVALUATION

The evaluation process for this capstone project is two-fold. The first is an evaluation of grant implementation. A pre- and post-test was created to assess the OTA students' knowledge base of sensory integration theory and related equipment before and after the application of the lectures and labs using the sensory station and trolley. The results of this evaluation will be reported to the Holmes Development Foundation to measure attainment of the objectives. The second is the evaluation of the capstone project, which is a satisfaction survey that was given to the capstone mentor as well as the fieldwork coordinator at Holmes. This instrument contained 12 Likert-scale questions and 1 open-ended question. Each question assessed the quality of the information provided within the grant proposal and whether the information provided a convincing argument for meeting stated objectives. The participants ranked most questions as "extremely satisfied", and one participant stated "...sensory trolley" will be a tremendous asset to our students."

PROJECT SUMMARY AND FUTURE RECOMMENDATIONS

Project Summary and Recommendations: The final results of the capstone project depend on the grant being approved when the submission window opens in October 2021. This leads to the recommendation that the next capstone student will assist the capstone mentor with using the awarded funds to implement the sensory station and trolley. After implementation, the capstone student and mentor are hopeful that student outcomes will improve as a result of the increased active learning opportunities using sensory integration theory.

Implications for OT: This project will have a direct impact on an OT professional school, having a lasting effect on student outcomes and learning, therefore improving patient outcomes when they begin treating. It will also enhance the understanding of the importance of including sensory integration theory and treatment techniques into OT academic curriculum. Lastly, this project will provide foundational knowledge for future OTD student on composing a scholarly grant proposal.

Proposed Grant Budget		
Vendor		Totals
Fun and Function	\$1,615.75	
SouthPaw Enterprise	\$1,871.00	
TFH (USA) Ltd.	\$138.00	
Lakeshore Learning	\$157.96	
Estimated Grand Total	\$3,782.71	

