Developing Assistive Technology Curriculum for Occupational Therapy Assistant Education

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North Shore Community College

Introduction

Setting

North Shore Community College
- Danvers, MA
- Two-year, Full-time program
- Occupational therapy assistant (OTA) degree
- Associate in Science

OT Interventions II (OTA 104)
- Lab-based (4hr lab, 2hr lecture per week)
- Second in a series of three OT interventions courses
- Focuses on OTA approaches, skills, and techniques for the application of occupation-based intervention

Gap

NSCC OTA department faculty expressed an interest in:

1) Expanding assistive technology (AT) curriculum for OTA 104 to further satisfy the *ACOTE B.4.11.* standard [1].

   ACOTE B.4.11. Explain the need for and demonstrate strategies with assistive technologies and devices (e.g., electronic aids to daily living, seating and positioning systems) used to enhance occupational performance and foster participation and well-being.

2) Receiving additional academic support during labs and lectures through a DEC student teaching assistant (TA) role.

Literature

- AT-competencies and practice standards should be addressed for effective and efficient AT service delivery by occupational therapists [6].
- Occupation-based professionals need to be cognizant of newer developing technologies to develop solutions for clients when they emerge [5].
- Simulation, small-group discussion, experiential learning, and case-based learning represent pedagogical methodologies that promote dynamic and problem-based learning [2, 3, 4].

Participants

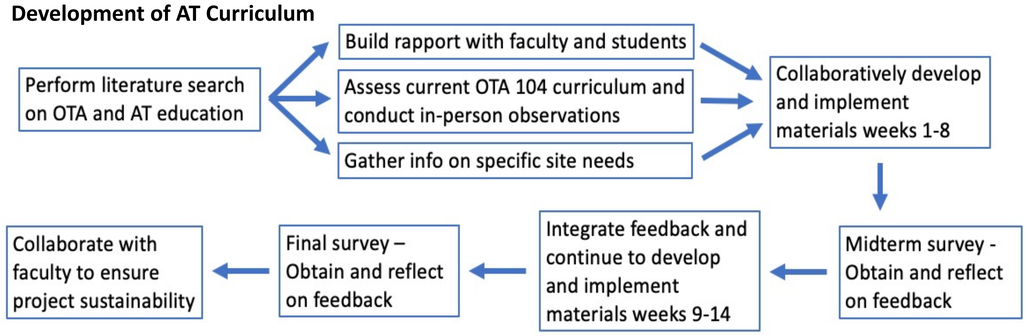
- 12 NSCC OTA students
- Student age range: 21-55yo
- 0 of 12 students have received formal AT education
- 2 of 12 have received informal "on the job training" for use of AAC devices

Project Aims

1. Develop and enhance pedagogically varied resources, such as case studies, reverse-classroom lectures, presentations, and lab activities related to ACOTE standard, B.4.11.
2. Serve as a teaching assistant for OTA 104 to provide academic support during lab sessions and reduce the instructor's workload to allow more time for course development.
3. Establish a sustainable plan for OTA faculty to implement and expand upon learning materials for future OTA cohorts.

Process

Development of AT Curriculum



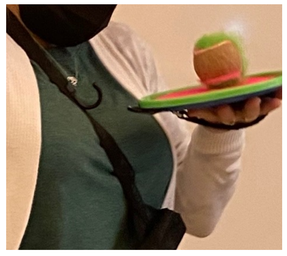
Products

Lectures
- BADLs and AT
- Adaptive Sports
- Low vision and AT
- OT process

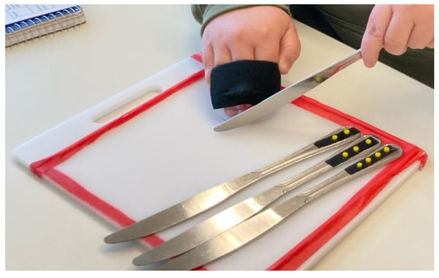
Lab activities
- AT/OTPF Clinical reasoning focus group
- Low tech prototype assignment
- Personal device accessibility features
- Remedial/compensatory interventions
- Low vision simulation activity

Scan this QR code to see assignments and lectures

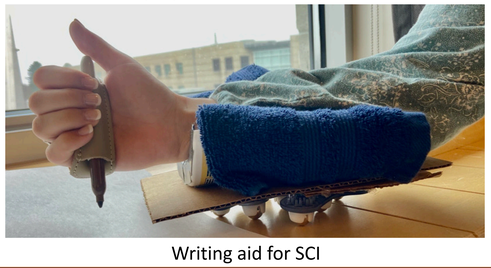
NSCC OTA 104 Student Low-Tech Prototypes



Equipment hook for UE amputation



Meal-prep set for visual impairment



Writing aid for SCI

Adapted paddle for UE amputation

Extended handle for UE amputation

Final Survey Results

Student learning preferences
- *50%* of students stated that that the low-tech prototype assignment was their favorite AT-related assignment.
- *92%* of students stated that they prefer hands-on learning activities to lecture-based instruction.

Student satisfaction with AT curriculum development
- *100%* of students Agree/Strongly Agree that:
  - Instructional materials increased their knowledge of AT topics over the course of the semester.
  - The in-person instruction provided, coupled with assigned readings, adequately prepared them for completing AT assignments.
  - AT-related course content was well-integrated into the broader course design.

Additional Roles

Academic support
- One-on-one instruction
- Group discussions
- Practice performance assessments
- Test-prep
- Lab project activities
- Grading

Professional development
- NSCC professional dev. seminar
  - Accessibility services
  - Cultural diversity in education
- School-wide division meetings/OTA department meetings
- Scholarship agenda

Strengths and Limitations

Strengths

Process
- Immersive experience which helped foster holistic approach.
- Multiple opportunities to design, implement, and revise materials throughout the semester.
- Ample opportunities for peer collaboration.
- Professional development meetings and seminar contributed to project growth and development.

Outcomes
- Thorough assignments and materials prepared for future instructors.
- High satisfaction rates among students regarding AT curriculum.

Limitations

Process
- Tailoring materials for OTA-level students with OT-level background.
- Trialing materials with present cohort impacted cohesion of implementation.

Outcomes
- Difficult to assess the efficacy of products in the span of a single semester.
- Small student sample size (n=12) limits generalizability.
- Survey results may be influenced by relationship between NSCC /DEC students.
- The lab assistance provided by two DEC students will not be available for the following OTA 104 course offering.

Recommendations

The work of this project can be continued by:
- Continuous development and revision of AT curriculum and its integration into course design.
- Use of survey results to guide approach to AT curriculum development.
- Alignment of AT curriculum with co-occurring course curriculums.
- Further data collection on the impact of AT curriculum across multiple cohorts.

Acknowledgements

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References