

# Examining PBL Curriculum Concurrent with Fieldwork I Experience

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## INTRODUCTION

Problem-based learning (PBL) is a student centered, self-directed educational pedagogy. The PBL pedagogy originated in the late 1960s in Canada to improve the education in medical schools (Badeau, 2010). Opposed to traditional lecture-based learning, the problem-based learning paradigm, incorporates an active learning process where students are in control of their learning to help solve an “open-ended real-world problem” (Leavy et al., 2022, p. 58). Additionally, research expressed that there’s compounding variables influencing students’ fieldwork (FW) experiences that are dependent on external-environmental factors (Varland, 2017).

The primary issue that has been seen in the literature is a gap in transferring educational knowledge to clinical experiences. Students are finding it difficult to conceptualize how their didactic courses will translate to their work as future clinicians. Implementing a problem-based learning (PBL) module will allow students to practice various skills they’ll need as clinicians such as reading and comprehending patient charts, designing and implementing treatment plans, and problem-solving. To properly investigate confounding variables, a survey was administered to OT students who recently completed their Level I pediatric fieldwork rotation. After careful examination of the results, a PBL module was designed and implemented. This research will utilize a single case study in a PBL framework to focus on different scenarios clinicians may encounter in the field.

## MATERIALS/METHODS

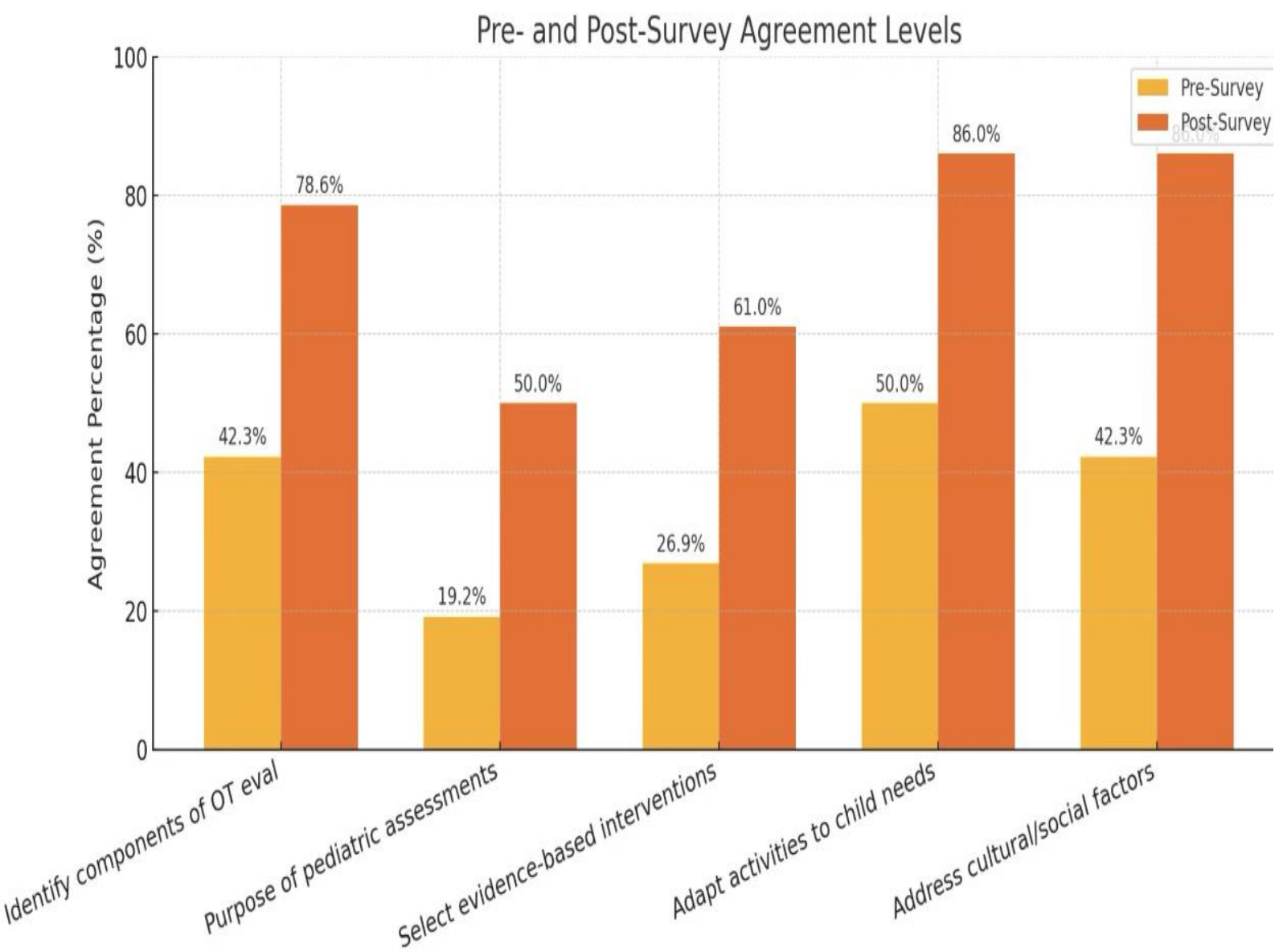
The study used a mixed methods research design. A survey was given to third-year OT students at SUNY Downstate to inform researchers on their Level I pediatric FW experiences and didactic curriculum. This data was then utilized to develop a PBL module for second-year students to gain clinical readiness for their pediatric FW rotation.

A pre-and post-survey was given to second-year students to determine the effectiveness of instilling a PBL curriculum. Both a statistical and qualitative analysis were performed to investigate whether the PBL curriculum increased student confidence and improved clinical readiness for FW. Students reported benefitting from various components of the PBL module. Despite the effectiveness, students still expressed concerns. Incertitude surrounded aspects of treatment that can only be learned through clinical experience and training such as managing cultural differences, delivering culturally competent treatment, and effective caregiver communication.

## RESULTS

Question	Positive %	Negative %
Did you have the opportunity to speak with the parents of your patients during your pediatric fieldwork rotation?	Yes or somewhat: 26%	No: 73%
How much support did you get from your supervisor?	A great deal: 53%	A little: 27%
Did you feel like your supervisor had an overwhelming caseload?	Yes: 27%	No: 47% Unsure: 27%
Did you feel like your supervisor had the resources to take on an additional educator role?	Yes: 66%	No: 27% Unsure: 7%
How much experience did you have with children prior to your placement?	A lot: 47% Moderate: 13%	A little: 40%
Do you feel the Downstate curriculum prepared you for fieldwork?	Mostly: 33%	Somewhat: 13% A little: 53%
Were you able to practice writing session notes during didactic coursework?	Yes: 20% Somewhat: 47%	No: 33%
Were you taught what to observe during a pediatric session?	Yes: 33%	Somewhat: 53% No: 13%
Were you taught how to create intervention plans that could be modified during sessions based on your patient’s needs/wants/endurance?	Yes: 33%	Somewhat: 53% No: 13%
Did you feel able to implement downgrades and upgrades using clinical reasoning?	Yes: 53%	Somewhat: 47%
Did you learn how to speak with the parents of your patient?	Yes: 67%	Maybe: 33%
Do you think you would benefit from an additional learning module specifically designed for pediatric fieldwork experiences?	Yes: 47% Somewhat: 27%	No: 13% Unsure: 13%
Do you think simulation/case studies could support you in fieldwork?	Yes: 53% Somewhat: 33%	No: 7% Unsure: 7%

Table 1: Quantitative data collected from the survey through likert scales. The sections in gray support the creation and implementation of a PBL.



## LIMITATIONS AND FUTURE CONSIDERATIONS

Limitations included a lack of generalizability to every OT program as surveys were designed for a master’s program and curriculum varies by institution. Additionally, the data only reflects preparation for a Level I pediatric FW rotation.

## DISCUSSION

The survey of third-year students shows an evident dissatisfaction in the effectiveness of the Downstate curriculum regarding preparing students for their pediatric rotation. Majority of students felt untrained in several aspects of the profession. Statistics also show that many students believe the addition of simulations, case studies, and/or a PBL would further contribute to advancing their knowledge as future occupational therapists and believed that seminar style teaching for this rotation did not reflect the setting and the demands of the population.

According to pre and post surveys conducted on the second-year students who went through the implementation of the PBL there was an overall increase in knowledge and confidence. There was roughly a 30% increase in students who agreed that the PBL improved their understanding in pediatric specific topics such as reading clinical charts, creating occupational profiles, creating treatment plans for a child with complex medical needs, and pivoting treatment when needed.

## CONCLUSION

The purpose of this study was to investigate whether incorporating PBL into Downstate’s pediatric curriculum would positively influence student readiness in their Pediatric Level I rotation. Initial research conducted on third-year students indicated mixed findings on whether Downstate adequately prepared students for their pediatric FW level I rotation and that seminar time could be used in a more productive manner. Backed by previous research on the benefits of PBL implementation in healthcare fields, researchers believe that incorporating a PBL prior to Pediatric FW I Rotation at Downstate would result in improvement of clinical reasoning, self-confidence, communication skills, and application of theoretical constructs on real world problems. After incorporating a PBL module for Downstate’s second-year students, results indicated effectiveness. Though some students expressed concerns that can only be learned through on-site exposure, overall students found that the PBL module improved their clinical readiness for FW.

