

Engineering Instruction for All: Empowering Students with Moderate to Severe Intellectual Disability Through UDL

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Project BEES Goals

- To promote high-quality engineering instruction in elementary schools for students with MSD
- To investigate elementary school teachers' development of conceptual and epistemic understanding of engineering education for students with MSD and optimal ways to support both understandings through engineering design curriculum implementation

Introduction

- Students with disabilities are historically underrepresented within STEM education, especially students with MSD
- Educators report feeling unprepared to teach engineering skills, especially to students with MSD

Research Questions

How does teacher participation in the professional development program influence their perspectives on teaching engineering to students with MSD?

What successes and surprises are encountered by both teachers and their students?

Method

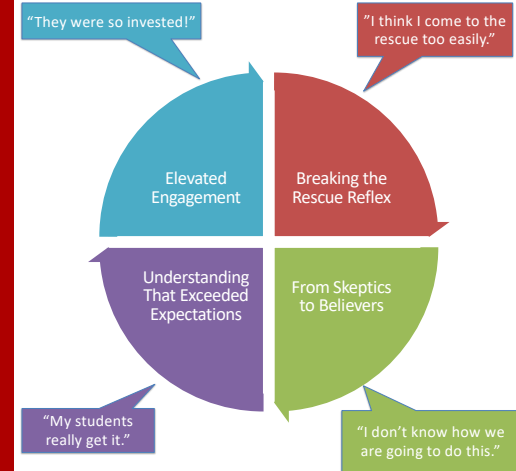
- Qualitative Case Study Approach
- Five elementary teachers for students with MSD engaged in a year-long study, attending professional development sessions while implementing an engineering curriculum using UDL strategies
- Data Sources: Semi-structured interviews, focus groups, and self-efficacy surveys collected and analyzed using thematic coding



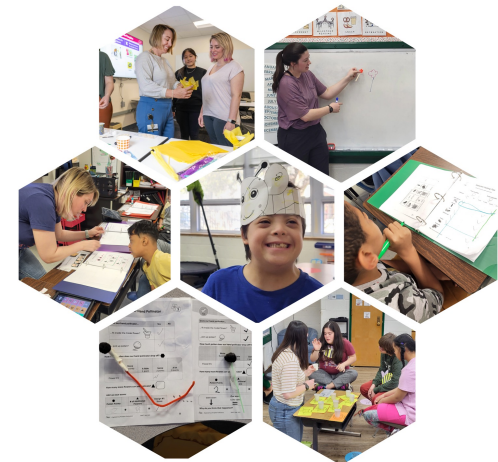
UDL unlocks access to engineering instruction for students with intellectual disabilities, turning skeptics into believers.



Thematic Analysis Results



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