

Faculti Summary

<https://staging.faculti.net/creating-with-code/>

This video outlines an outreach program focused on teaching coding and design thinking to children, predominantly in Canada. The program aims to enhance the training of mentors and develop educational materials, specifically a book. It identifies a gap in existing software's ability to teach creative problem solving effectively, an area of research interest for the program.

The program incorporates a programming language called Elm, which was developed to modernize web development for self-taught programmers. Elm's success led the team to create a graphics library to further simplify teaching coding, making it accessible to young children.

The curriculum emphasizes "algebraic thinking" to prepare students for challenges in secondary education, particularly in algebra, and focuses on debugging and functional programming. The instructors aim to develop students' critical thinking skills through practical problem-solving approaches, including the classic Tower of Hanoi problem as a teaching tool.

This video discusses the importance of human-centered design, stemming from the works of Herbert Simon and George Dantzig during World War II. It highlights the need for empathy in design and education, emphasizing the importance of preparing students for a rapidly changing job market with an emphasis on creative problem solving over rote learning.

Furthermore, the program incorporates projects where older students create games to teach younger students math concepts, illustrating an engaging method of learning. This video concludes with reflections on the future of education in the context of AI and automation, stressing the need for a balance between rote learning and developing concrete skills necessary for problem-solving.