

I Can DigIT!



Using technology-focused project learning to strengthen special education pupils' self-efficacy, cooperation, and interaction skills

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Background

- The research and technology-focused project was conducted at Rantakylä Teacher Training School, which is part of the University of Eastern Finland.
- The school provides education from primary to lower secondary levels and has specific spaces for small groups of pupils with special educational needs.
- The project focused on two small groups of pupils with special educational needs.



Technology-Focused Project Learning

- Team of experts planned and implemented technology-focused projects using inclusive pedagogies.
- The projects included Lego Spike Prime (programming skills), micro:bit (programming skills and making), and Minecraft (collaboration constructing in a digital three-dimensional world).



Research

- The purpose of research was to find out how students' self-efficacy and cooperation skills develop with the support of the digital exercises implemented during the research period.
- Self-efficacy and cooperation skills were assessed by using questionnaires.
- The project brought together a multidisciplinary research team. Both the teacher training institute and the teacher training school were represented. Both master's studies and post-doc research were conducted on the project.

Outcomes

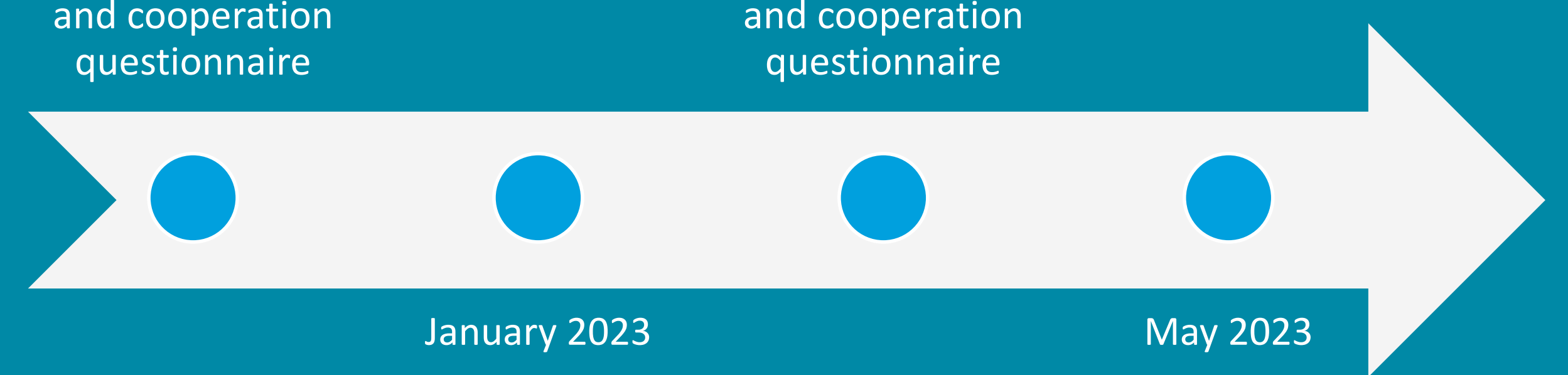
- Self-efficacy and cooperation skills of the students were assessed by comparing the average self-assessment responses.
- The results showed that the students had a relatively high level of self-efficacy, which remained stable throughout the study period.
- In contrast, the students' evaluations of their cooperation skills consistently increased from the first measurement point to the fourth measurement point.

December 2022
Self-efficacy
questionnaire
and cooperation
questionnaire

March 2023
micro:bit
Self-efficacy
questionnaire
and cooperation
questionnaire

January 2023
Lego: Spike
Self-efficacy
questionnaire
and cooperation
questionnaire

May 2023
Minecraft
Self-efficacy
questionnaire
and cooperation
questionnaire



The Future

- The successful first phase of the project drives ongoing development.
- Next phase aims to innovate technology content for enhanced student cooperation skills.



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