



GIREP-EPEC

Transforming physics learning via Research & Practice
LEIDEN, 2025

Contribution ID: 65

Type: **Poster**

Developing Scientific Agency in Bachelor Physics Students

Monday 30 June 2025 16:30 (1 hour)

Science labs offer students unique opportunities to develop scientific agency through experiments that foster relevant skills and attitudes, such as making substantiated decisions. This study explores how science bachelor students develop scientific agency in laboratory settings through decision making. We will focus on the interplay between decision making, higher-order thinking skills and motivation. Using a mixed-methods approach—including surveys, observations, and interviews—we seek to identify factors that influence students' decision-making processes. An educational design study will lead to evidence-based recommendations for the design of science laboratories with the goal of improving laboratory education.

Education level

Age over 18 (excluding teacher education)

Physics topic

Other

Research focus

Lab course design

Research method

Educational design research (Qualitative research)

Organizing preference criteria

Research method

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Session Classification: Poster session

Track Classification: Educational research methodology (METHOD)