



GIREP-EPEC

Transforming physics learning via Research & Practice
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Contribution ID: 30

Type: **Poster**

Assessing students' carbon competence regarding the effectiveness of climate action measures

Monday 30 June 2025 16:30 (1 hour)

Anthropogenic climate change is shaping the world we live in. Therefore, fostering climate agency is an important goal of science education. To develop climate agency, learners should acquire competences necessary to make informed and effective decisions about climate-related actions. Carbon competence plays a critical role in this process. The contribution presents the development of a test instrument assessing students' carbon competence associated with specific actions. These actions are situated in relation to the dimensions of individual vs. collective agency and everyday vs. strategic and political agency to represent central types of climate action.

Education level

Age 15-18 (Secondary education)

Physics topic

Climate physics

Research focus

Evaluation & Assessment

Research method

Analytic Physics Education Research (Quantitative research)

Organizing preference criteria

Track

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Session Classification: Poster session

Track Classification: Evaluation & Assessment (EVAL)