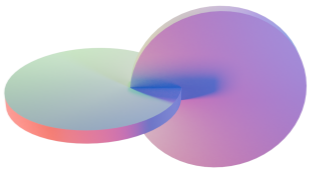

GIREP-EPEC
Transforming physics learning via Research & Practice
LEIDEN, 2025

Contribution ID: **297** Type: **Oral presentation**

The impact of spaced learning within physics lessons in secondary schools

Friday 4 July 2025 13:20 (20 minutes)

This study investigated the impact of a single video lesson with a spaced learning inputs and timed distraction breaks on students learning of a novel physics topic: atomic structure and nuclear decay. Among 336 students aged 14-16, those receiving SL video lessons alone showed comparable results to traditional teaching in separate science physics. However, using SL in addition to traditional teaching produced 50-90% higher learning gains. For combined science students, SL plus traditional teaching led to 60% greater gains than controls. Results indicate that one hour of SL significantly boosts traditional teaching effectiveness, with implications for teacher workload and wellbeing.

Education level

Age 15-18 (Secondary education)

Physics topic

Other

Research focus

Other

Research method

Organizing preference criteria

Author: HARTLEY, Rachel

Co-author: BERNARDELLI, Alessio (Institute of Physics)

Presenter: HARTLEY, Rachel

Session Classification: Parallel oral presentations

Track Classification: Cognitive science research (COGN)