GIREP-EPEC

Transforming physics learning via Research & Practice
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Contribution ID: **230**   Type: **Oral presentation**

From the atomic nucleus to popcorn: Guided use of AI for the development of critical thinking in IPN high school

Wednesday 2 July 2025 10:00 (20 minutes)

This inquiry refers to how the use of Artificial Intelligence influences the construction of scientific arguments in the process of experimentation in Physics with high school students in Mexico, where a dependence on the excessive use of AI for argumentation was observed, in such a way that limits the development of critical thinking, since AI generates superficial and sometimes inaccurate answers. However, when teaching guidance is provided, students improve significantly, students demonstrate an evaluation of the information provided by AI by ascertaining sources that show a guideline in the construction of arguments.

Education level

Age 15-18 (Secondary education)

Physics topic

Other

Research focus

Lab experiments

Research method

Educational design research (Qualitative research)

Organizing preference criteria

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Session Classification: Parallel oral presentations

Track Classification: Artificial Intelligence (AI)