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

Contribution ID: **94** Type: **Oral presentation**

Validating chained computerised adaptive testing for the Force Concept Inventory

Wednesday 2 July 2025 09:20 (20 minutes)

In our previous study, we developed an algorithm called chained computerized adaptive testing (Chain-CAT), which sequentially links the test results of each administration. To validate the algorithm, we analysed the progression of the conceptual understanding of each student based on Chain-CAT against a clinical interview, then examined the consistency of both results. A pilot study showed that there was uncertainty in scoring among analysts about the methods of quantifying the interview utterance data. To address the issues, the survey procedure was improved for the main study. The results of the main survey (which is now underway) will be reported.

Education level

Age over 18 (excluding teacher education)

Physics topic

Other

Research focus

Evaluation & Assessment

Research method

Mixed method (qualitative & quantitative)

Organizing preference criteria

Track

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Session Classification: Parallel oral presentations

Track Classification: Evaluation & Assessment (EVAL)