R & D Funding Call 1

62nd IEA General Assembly meeting
25 – 27 October 2021
Thierry Rocher
Developing research and innovation

• Contributes to IEA’s mission to provide a model for research in education and innovative approaches

• The Research and Development (R&D) Fund was developed to advance and improve the science and methodology of IEA and its studies

• Funding is drawn from a 3% overhead on participation fees across IEA studies
Call 1: Thematic call

• Thematic call for research proposals on computer-based assessment

• Possible topics included, but were not limited to:
  – Transition from PBA to CBA, including overcoming obstacles for this transition
  – Collection and use of log and process data
  – Innovative assessment designs (e.g., interactive items, adaptive designs)
  – User-interface design and test-taking experience

• Released 3 March 2021 with submission deadline 3 May 2021
Summary of proposals

• 17 proposals received in total
  – from universities, research institutes, and ministries
  – from the IEA network and beyond
  – including from international study centers, national study centers and IEA staff

• Tier I proposals: 4
  – 6-month duration, € 50,000 limit

• Tier II proposals: 13
  – 12-month duration, € 100,000 limit
Summary of review process

• All proposals assigned to at least two reviewers
  – One internal and one external reviewer recognized as experts on the respective topic
• In the case an identified reviewer declined, alternatives were contacted
• One proposal with conflicting reviews was sent to a third reviewer
• Top 5 proposals were sent to the Standing Committee for consideration
Funded Proposal 1

- **Title:** Validity and measurement properties in technology-enhanced items: A balancing act
- **Lead Researcher:** Saskia Wools, Cito
- **This study aims to:**
  - Evaluate the validity of results of international large-scale assessment programs that incorporate technology-enhanced items (TEIs), with special attention to comparability of results between countries.
  - Develop a general framework for technology-enhanced measurement and identify guidelines to specify what type of TEIs function psychometrically sound and under what conditions.
Title: Understanding students’ computational thinking strategies and test taking behaviors across countries using process data in ICILS 2018 with analytical approach

Lead Researcher: Qiwei-Britt He, Educational Testing Service (ETS)

This study aims to:
- Identify and characterize profiles of students computational thinking (CT) strategies and test-taking behaviors by proficiency level.
- Examine whether these CT strategies and behaviors are different across countries.
- Assess whether CT strategies and behaviors are related to students’ performance on computer and information literacy.
Funded Proposal 3

- **Title:** Using neural network classification for the automated scoring of image response items in TIMSS 2023
- **Lead Researcher:** Lale Khorramdel, Boston College
- **This study aims to:**
  - Explore capabilities to train neural network models for the automated scoring of graphical responses using TIMSS 2019 and TIMSS 2023 field test data.
  - Explore whether this process can help facilitate additional stages of quality control after data collection.
What went well

• Communication about the funding opportunity reached the appropriate audience and appears to be attractive.
• Many of the applications were relevant and high quality with a mix of applied and foundational approaches.
• Overall, reviewer feedback was detailed and helpful for committee members making decisions.
Areas for improvement: The call

• Criteria for identifying out-of-scope proposals should be clear (e.g., that these will be screened but not reviewed).

• General information on "terms and conditions" should be specified and the call should clarify that these are sponsored research grants that need to have value for IEA and its studies (in contrast to unconditional grants).

• Additional information about the review process should be added to the call to ensure it is clear how reviewers will be assigned to proposals.
Areas for improvement: The review process

- More time needs to be allocated to the review process.
- Reviewer forms should be changed to include clearly defined sections of information to be shared with the proposal authors so that reviewer feedback is more transparent.
Future calls

• Future calls could consider alternating between open and thematic calls.

• Proposed timeline for call 2:
  • 1 February – Call for proposals released
  • 1 April – Proposals due
  • 30 July – Proposals reviewed and awardees selected
  • 30 September – Contracts signed with awardees
  • GA meeting – Announcement of awardees, reports on insights from previous round
Thank you!