

Psychological Science and Educational Research Funding Opportunities at NSF and IES



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& Rob Ochsendorf (NSF)**

**Webinar with the Association for Psychological Science
April 27, 2021**

Session Agenda

- **General issues that arise in seeking funding for work at the intersection of Psychological Science and Education**
 - Gregg Solomon (NSF)
- **Funding support for research on learning and education at NSF**
 - Rob Ochsendorf (NSF)
- **A Case Study of the Institute of Education Sciences' Funding for Projects at the Intersection of Cognitive Science and Education**
 - Erin Higgins (IES)

My Usual Rant

- **There is no such thing as Education**
 - Isolation of literatures, methods, and training
 - Questions, theories, factors, evidence
 - For some questions, no single field takes it from A to Z
- **Pressure for immediate impact on practice**
- **Heavily politicized / moralized**
- **Magic bullet solutions to complex problems**
 - Public lack of awareness that the answers to some questions might elude immediate reflection and are at least in part empirical
- **Turf and pecking order**
 - Ideological stances

Us and Them

- **The view from Psychological Science:**
 - “Applying learning research findings to practice? Feh, mere engineering!”
- **The view from Education Research:**
 - “Scientists opining on practice? Arrogant navel-gazing child-hating ivory tower logical positivists!”
- **The view from the domain-disciplines:**
 - “Ed and Psych research? No, it’s all about the content. If only this were done by real scientists!”

Education research & Interdisciplinarity

- **Mantra of Interdisciplinary Research**
 - Assumed to be a good in and of itself
 - But Education is overripe for interdisciplinary approaches, esp. with Psychology
- **Real costs to the research**
- **Career risks for individuals**
- **Funding challenges**

Where to submit?

- **Who should care about your project outcome?**
 - What literatures are you advancing?
 - How direct an impact on practice?
- **What else has the funding program supported?**
 - Program website; journal article acknowledgements
 - Get colleagues' past awards/declines
- **What fields are represented on the review panel?**
 - Is it multidisciplinary?
 - Do they know your literatures?
 - Do you know theirs?
- **Panel cultures differ (even within a program)**
 - With implications for proposal writing

Aspects that Vary by Program

- **Literatures reviewed**
 - Which literatures? How much detail?
 - Implications for other literatures or practice?
- **Methodologies and Analyses**
 - How much detail?
- **Pilot testing required?**
- **Expected Budget sizes**
 - PI Effort, Advisors, Post-Docs, Research Assistants
- **Any Post-panel Negotiation?**

Some (underappreciated) advice

- **You have to be vague about something. What?**
 - You can't do justice to all literatures touching a multidisciplinary project, but you should be aware of them
 - Are some literatures more important in the eyes of the program than are others?
 - Make implications for translation clear, but don't oversell
 - Get comments on a draft
- **Consider those tired middle-aged eyes reading quickly**
 - Reviewers can get annoyed or bored quickly
 - Do not assume that they will hang on your every word
 - Exposition and graphic design matter, sometimes a lot

Advice especially for Psychological Scientists coming into Education

- **Most/all reviewers won't know your literature**
 - They might be biased against certain theoretical/ideological stances
 - Education literature will likely be seen as primary
 - There is gold in them thar hills – Get a native guide
- **Answer the question “So what?”**
 - Make implications for translation clear, but don't oversell the importance
 - Don't underestimate the heavy intellectual lifting still to be done
 - Is the grain size of your question right? Big enough to matter, small enough to do?
- **Methodological/analytic differences**
 - A single ecologically-valid study vs. patchwork of linked studies
 - Unit of analysis? Small n? Effect size?
 - Context given appropriate weight?

A Decline doesn't mean go away forever

- **Talk to the Program Officers – they can help interpret panel feedback. It could be that ...**
 - The reviewer was insightful and the proposal was correctly declined;
 - The reviewer was correct but overweighted the weaknesses or underweighted the strengths;
 - The reviewer was correct but missed that the concern had been addressed in the proposal; or
 - The reviewer was just wrong... sorry.

Your Nation Needs You

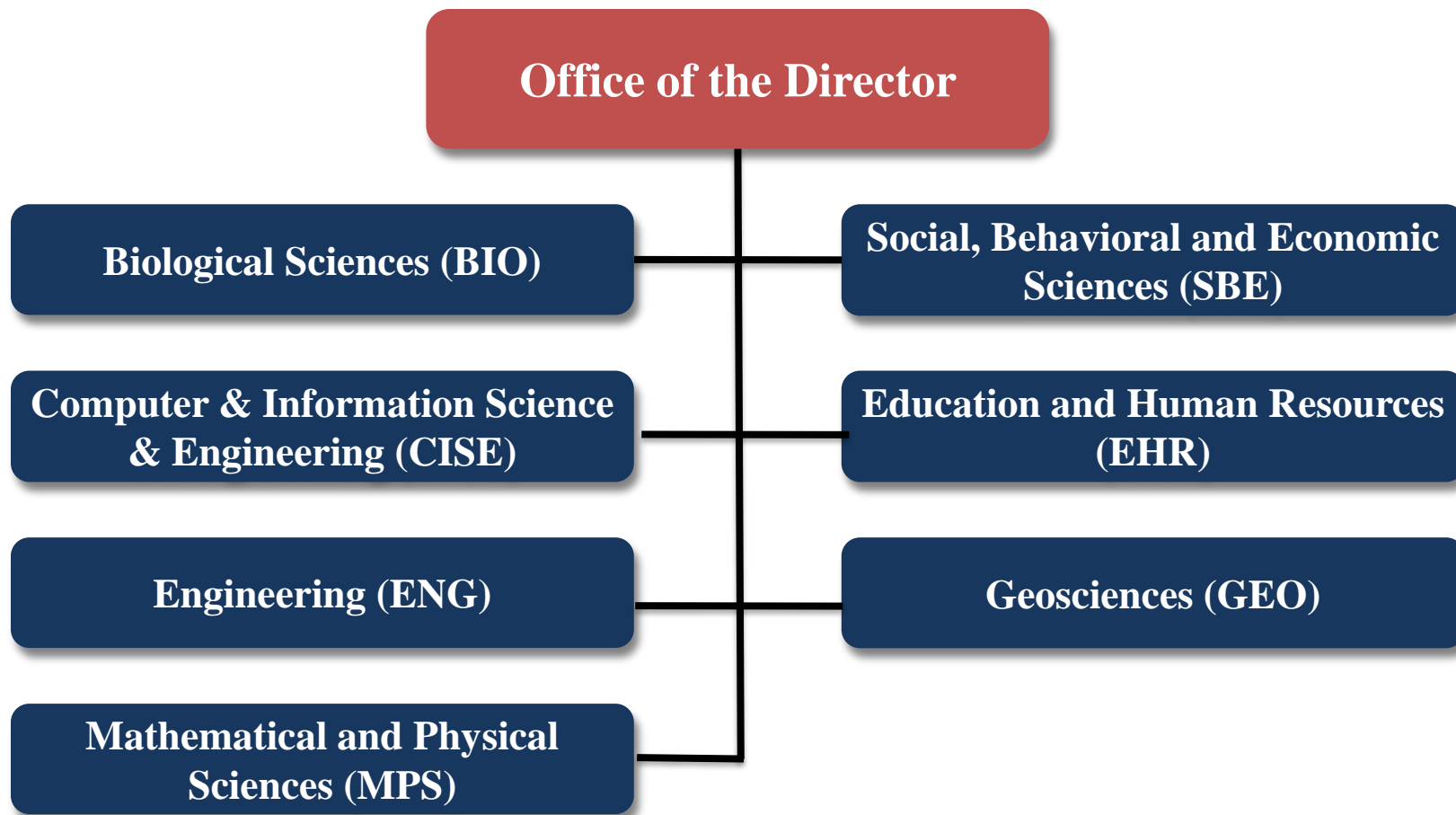
- **Be a reviewer**
 - No better way to get to know a program
- **Be a program officer**
 - Okay, this is an even better way
- **Suggest folks to us**
 - Especially junior colleagues and members of populations underrepresented in STEM fields

See also ...

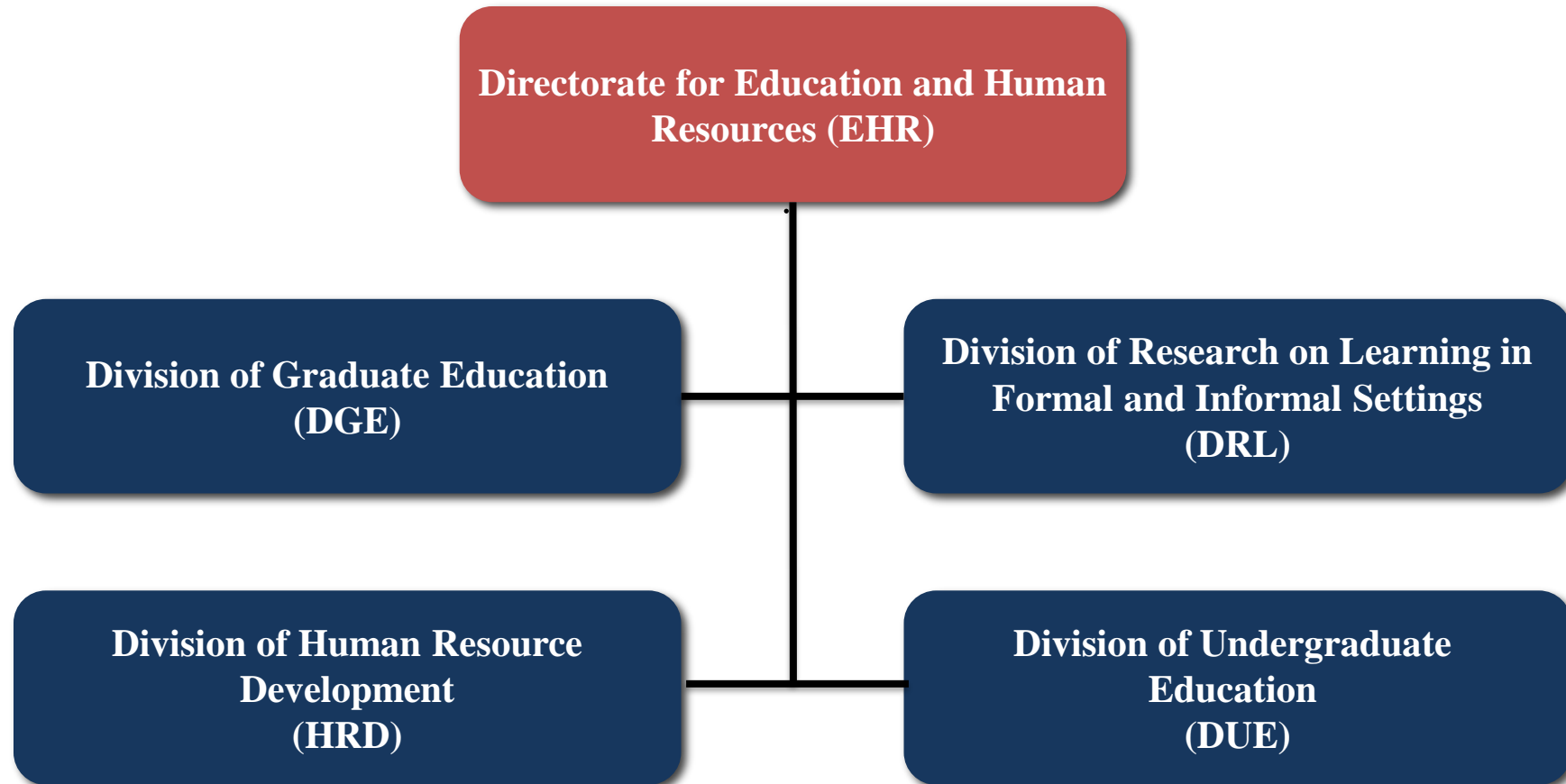
King, K., Ochsendorf, R.J., Solomon, G.E.A., & Sloane, F.C. (2020). **Posing fundable questions in mathematics and science education.** *International Journal of Science and Mathematics Education.*
<https://doi.org/10.1007/s10763-020-10088-4>.



NSF Directorates



EHR Divisions



Programs that support for research on learning and education

- **Programs in EHR (Education Directorate)**
 - [EHR Core Research \(ECR\)](#)
 - [Discovery Research preK-12 \(DRK-12\)](#)
 - [Advancing Informal STEM Learning \(AISL\)](#)
 - [Improving Undergraduate STEM Education \(IUSE\)](#)
- **Programs in SBE (Social Sciences Directorate)**
 - [Developmental Sciences \(DS\)](#)
 - [Perception, Action & Cognition \(PAC\)](#)
 - [Cognitive Neuroscience \(CogNeuro\)](#)
 - [Social Psychology](#)
 - [Science of Learning and Augmented Intelligence \(SL-AI\)](#)
- **Cross-Directorate programs**
 - [Integrated Strategies for Understanding Neural and Cognitive Systems \(NCS\)](#)
 - [Research on Emerging Technologies for Teaching and Learning \(RETTL\)](#)
 - [INCLUDES](#)

