Psychological Science and Educational Research Funding Opportunities at NSF and IES

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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 …

NSF Directorates

Office of the Director

- Biological Sciences (BIO)
- Computer & Information Science & Engineering (CISE)
- Engineering (ENG)
- Mathematical and Physical Sciences (MPS)
- Social, Behavioral and Economic Sciences (SBE)
- Education and Human Resources (EHR)
- Geosciences (GEO)
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