



Advancing Research in Education and Special Education over the Next 20 Years

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Overview

- On Measures, Methods, and Equity
 - ✦ Enhancing IES Research in Measurement
 - ✦ Joint Modeling of Measures and Persons
- The Challenge and Promise of IES Investigator Initiated Research
 - ✦ Do Not Ignore How Far We Have Come
 - ✦ Peer Review as Measurement: Imperfect, Subjective, and Useful
 - ✦ Think Tune-up, not Overhaul

On Measures, Methods, and Equity

- Education research uses many classes of measures
 - National/International Assessments:
 - ▲ NAEP, TIMSS, PIRLS
 - State Accountability Measures
 - ▲ Achievement, English Language Proficiency
 - District and Local Assessments
 - ▲ Formative Assessments, Standardized Tests of Specific Domains
 - Measures of Educational Inputs and Contexts
 - ▲ Instruction, Fidelity, Home Environment, Parent Engagement, Persistence and Motivation

On Measures, Methods, and Equity

- NCSEER and NCER are well positioned to investigate
 - the limits and utility of state accountability and language proficiency assessments,
 - the validity of decision criteria based on these assessments
 - federally approved approaches to identification of students with disabilities
- Assisting researchers in accessing item level test data would facilitate this work

On Measures, Methods, and Equity

- Joint modeling of measures and persons
 - With access to items it is possible to simultaneously model effects of test design on item difficulty and person characteristics on ability and study cross-level interactions
 - Can be combined with mixture models to identify latent classes of learners
 - These models allow us to go beyond differential item functioning and ask questions about sources of differences and the magnitude of their effects
 - They also allows us to determine if there are members of the target group for whom the test functions as designed

The Challenge and Promise of Investigator Initiated Research at IES

- NCER and NCSEER have substantially altered the landscape of education research for the better
 - National Literacy Panel reviewed research on reading instruction for ELs and found 17 studies in 2006; (NRP found over 450 for monolingual students in 2001)
 - The number and variety of studies on ELs has greatly expanded, including studies of ELs with disabilities
 - The number of true experiments, and quasi-experiments in education is significantly increased
 - Demands for stronger evidence are ever present

The Challenge and Promise of Investigator Initiated Research at IES

- Some people may argue that IES research has not impacted practice, but I think that is inaccurate
- Doug Fuchs and colleagues have written about the challenge of the changing counterfactual in education research
- In a study of at-risk ELs, Sharon Vaughn and I observed a significant change in the risk-status of ELs in grade 1

The Challenge and Promise of Investigator Initiated Research at IES

- Efficacy Studies 2002-2004
 - Screened 410 ; Identified 162 (28%) as “at-risk”
- Effectiveness Studies 2012-2014
 - Screened 1,291; Identified 97 (7%) as “at-risk”
- “at-risk” students in the effectiveness trials were also higher functioning:
 - Effect sizes:
 - ▲ 1.1 and 1.0 for letter word and reading comprehension
 - ▲ .38, .56, and .55 for word attack, PV, and LC

The Challenge and Promise of Investigator Initiated Research at IES

- IES Peer Review is not broken
- We may not always like IES Reviews, but they are actionable
 - OERI reviews could not be counted on in the same way
- Despite IES best intentions, IES review is no more objective than other peer review systems
- Peer review is subjective human judgement; it is not arbitrary

The Challenge and Promise of Investigator Initiated Research at IES

- My biggest concern about IES Peer Review is that reviewers know the cut-score
- This simple fact leads to imprecision around the cut-score that potentially makes funding decisions less about merit and more about who reviews
- This problem could be mitigated by granting program directors more discretion in making decisions in the impact zone (where scores are within the margin of error of the cut-score)

The Challenge and Promise of Investigator Initiated Research at IES

- If I could change only one thing about IES...
 - Increase the number of review cycles
 - Avoid the temptation to demand that all proposals address a specific objective
 - ▲ Special objectives merit special funding initiatives, not the entire program's resources
 - ▲ Twice in the last decade NCSEER funding has been seriously disrupted
 - Move to a standing Program Announcement and issue special addendums to encourage research in new directions



Thank You

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