

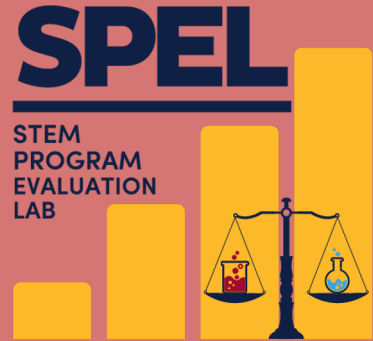
Diversity, Equity, and Inclusion in NSF funded ATE Evaluation Using Reflective Practice Towards Problem-Solving

Ayesha Boyce, Tiffany LS Tovey,
& Neelakshi Rajeev Tewari

Research on Evaluation TIG Webinar Series
January 30, 2024



ATE EVALUATION RESOURCE HUB



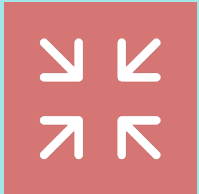
Our Time Today



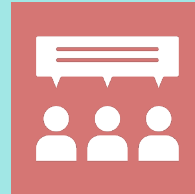
Introductions



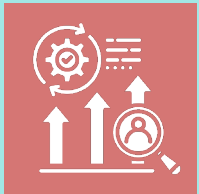
High level takeaways
and findings



Background and
context



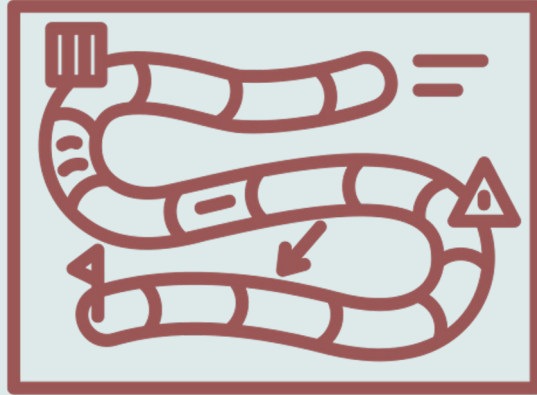
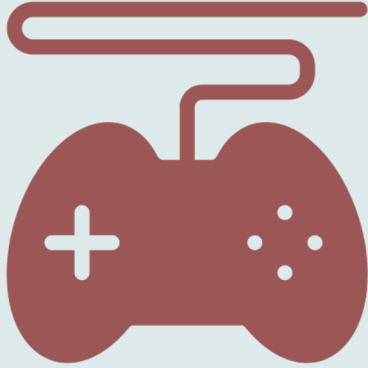
Dialogue on vignette



Overview of
research to-date



Debrief and reflections



Introduce yourself!

In the chat box, share your...

Name

Organization and Position

Favorite game to play

EvaluATE DEI Research Team



Ayesha Boyce
Arizona State University



Tiffany Tovey
University of North Carolina
Greensboro



**Neelakshi Rajeev
Tewari**
Arizona State University

Background and Context

**URM and
STEM Fields**



**Broadening
Participation**

US NSF Commitments

ATE Context

EvaluATE



Research Questions



How do ATE Evaluators and PIs **define and measure** diversity, equity, and inclusion (DEI) in their work?



How do these definitions **align** with the National Academy of Science (NAS) definitions?



What conditions or **resources are necessary** to engage DEI in ATE projects and evaluations?



What conditions within ATE **impede or facilitate collection of sound data** on DEI?

Early Methodology



Surveys
of PIs and Evaluators
(2019-2020)



Interviews
With PIs and Evaluators
(2020-2021)



Shifting focus...

At first, we wanted to understand the state of things...

Based on preliminary work, became interested in **proactive and collaborative discovery** of how the work can be done better.



HOW IT STARTED



HOW IT'S GOING

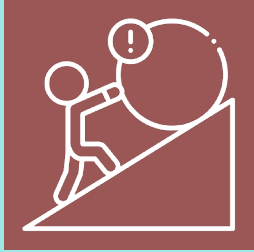
Surveys

Interviews

Participatory
case studies



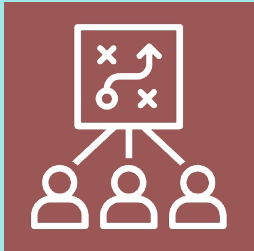
Case Study Research Questions



What **struggles** might ATE evaluators and PIs experience regarding DEI in their project and evaluation work and why?



When engaging in collaborative reflection, what **factors contribute to ATE evaluators' and PIs' development of action plans** for their DEI-related struggles?



What **plans for action** can be co-constructed between evaluators and PIs based on their collaborative reflective practice?

Current Methodology

Reflective and design-based action research with three cases

Reflect to understand the context deeply

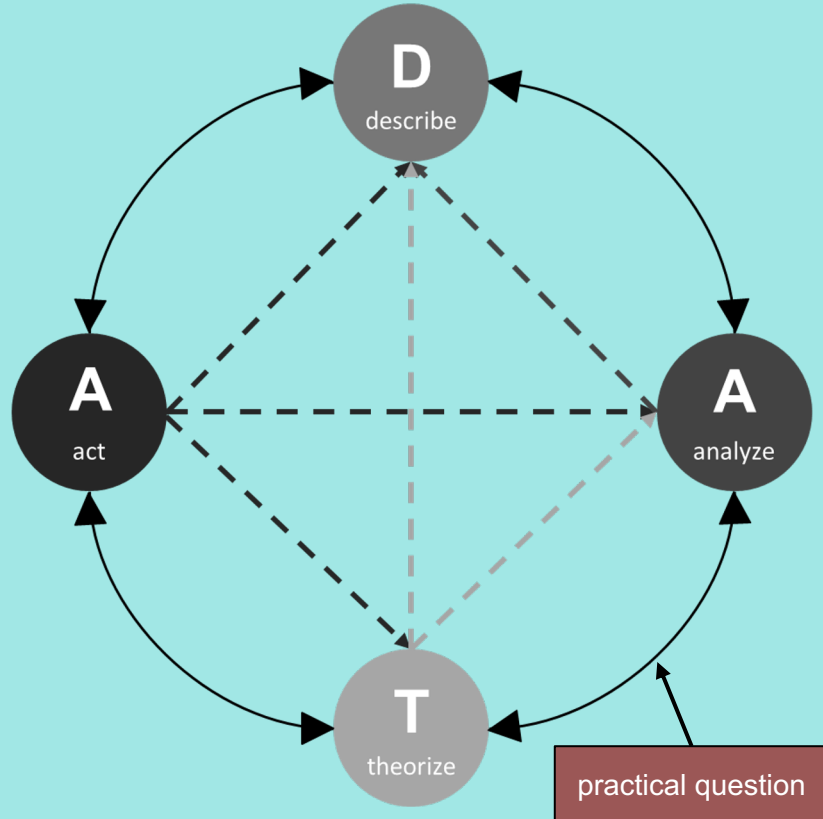
Develop action steps to address problems

Put actions to use and evaluate their effectiveness

Using the DATA-DATA Action Research Model (Peters, 2009)



The first DATA: Reflective Practice



Through dialogue...

(D)escribe: What is happening. What challenges are we seeing and experiencing in the evaluation context with regard to DEI efforts?

(A)nalyze: Why are we experiencing our practice in this manner? What assumptions are being made?

(T)heorize: Develop a practical theory. What are the possible ways to move forward? Of the possibilities, what is best in this situation?

(A)ct: What specific steps need to be taken on the basis of our reflection?

Reflective Practice

“An iterative process of thinking and questioning, self and contextual awareness, focused on learning and improvement for both the evaluator and those involved in the evaluation”

- Tovey & Skolits, 2022, p. 20



Reflective Practice...

Intentional

Requires **curiosity, humility, and authenticity**

Brings things out into the **open**

Bridges theory and practice

For becoming **wiser or better**

Helps **frame our inquiry**

Challenges assumptions, biases, ideologies, beliefs, and behaviors

Engages & values **multiple perspectives**

Accepts **ignorance and mistakes** as a part of practice

Builds **awareness and attentiveness** to context

Is concerned with **taking ACTION**



**A Vignette Based
on Our Work...**

What should the evaluator do?

The Characters: Three tenured PIs working on a STEM project across four different institutions in the same state; external evaluator with DEI commitments who is a tenure-track education assistant professor at a different institution than PIs, but in the same state.

The Project: The project aims to increase the number of women, Latine, and Black students in computer science. They are running a program to teach current faculty mentoring skills. They are using national mentoring standards, but the curriculum is not culturally responsive or sensitive.

The Situation: PIs focus on diversity alone, especially focused on numbers of underrepresented STEM identities. This evaluator is taking over in year 3 of 5 after the first evaluator retired. The majority of data collection has been surveys at this point with response rates varying.

What should the evaluator do?

The set-up: The three PIs and evaluator are at an in person all-day planning retreat for the project activities for the next 3 years of the project. The external evaluator has expressed interest in and advocated for the collection of data around inclusivity and equity in the mentoring curriculum, implementation, and outcomes. 2 of the three 3 PIs are resistant to changing the evaluation. One PI is interested, but has budget concerns. The other two just are not sure such things can be measured and are not sure that equity and inclusion are the focus of the project, just good mentoring. The funder does not have any explicit requirements of the evaluation beyond outputs associated with the number of participants, attrition rates, satisfaction, and scores associated with pre/post assessment of mentoring skills.

Questions for Dialogue



What is the evaluator's role and/or responsibility in this situation?



What should the evaluator do?



How does this situation relate to your own DEI-related evaluation experiences?



Share in the chat box...

What are you leaving your breakout room **thinking further about?**

or

What **new insight(s)** did you gain from your dialogue?



High-Level Takeaways and Findings



Reflective practice is key

Having a framework to guide reflection helps

Facilitators provide active engagement

Intentional time must be built in

Space needs to be created for authentic and difficult
conversations



People impact how DEI shows up

Their own commitments

Relationships

Lived experiences



Context impacts how DEI shows up

Participant demographic & project goals

Size of project and organization

Number of decision makers involved

Project commitments to DEI



The PI-Evaluator relationship impacts how DEI shows up

Evaluator can be the voice for DEI

Power dynamics



Commitments impact how DEI shows up

Ethical and moral commitments of
PIs and evaluators

Funder commitments

Questions or Comments?

Thank you for your time!

Ayesha Boyce | ayasha.boyce@asu.edu

Tiffany LS Tovey | tlsmi32@uncg.edu

Neelakshi Rajeev Tewari | ntewari1@asu.edu



Resources Linked Below!

Exploring NSF-Funded Evaluators' and Principal Investigators' Definitions and Measurement of Diversity, Equity, and Inclusion
(Boyce et al., 2022)

Diversity, Equity, and Inclusion in Evaluation: Definitions, Evaluation Questions, Indicators, and Data Collection Methods

EvaluATE DEI Study Website and Reports

DATA-DATA (Peters, 2009)
Action Research Process

Acknowledgements



This material is based upon work supported by the United States National Science Foundation under Grant Numbers (1841783, 2332143).

Thank you to the EvaluATE team located at Western Michigan University.