

# TEE Teacher Mentoring

Implications for practice based on a national mixed-methods study



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# Outline

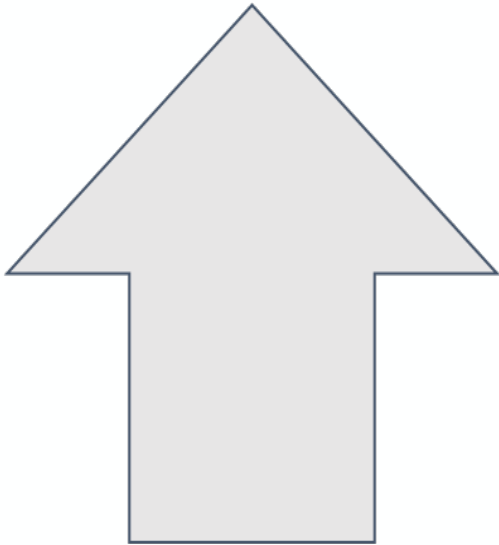
- Background
- Methodology
- Findings
- Implications for practice
- Questions



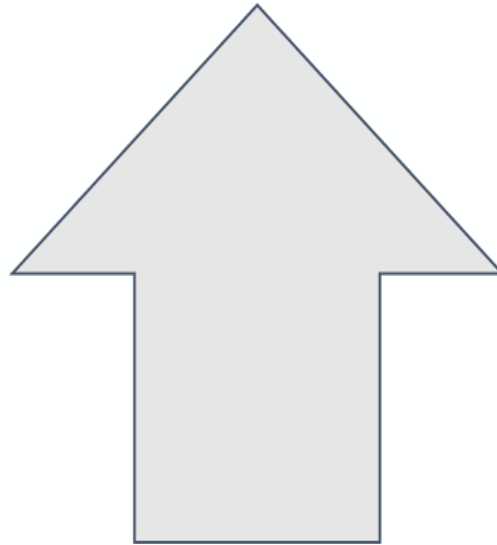
**Background**

# Background – the Need

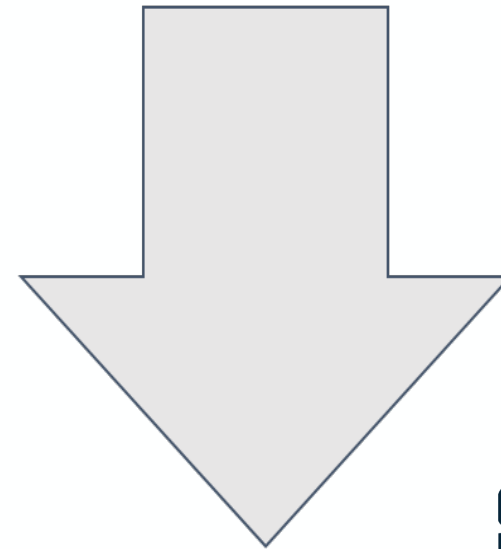
Increased demand  
through growing CTE  
programs



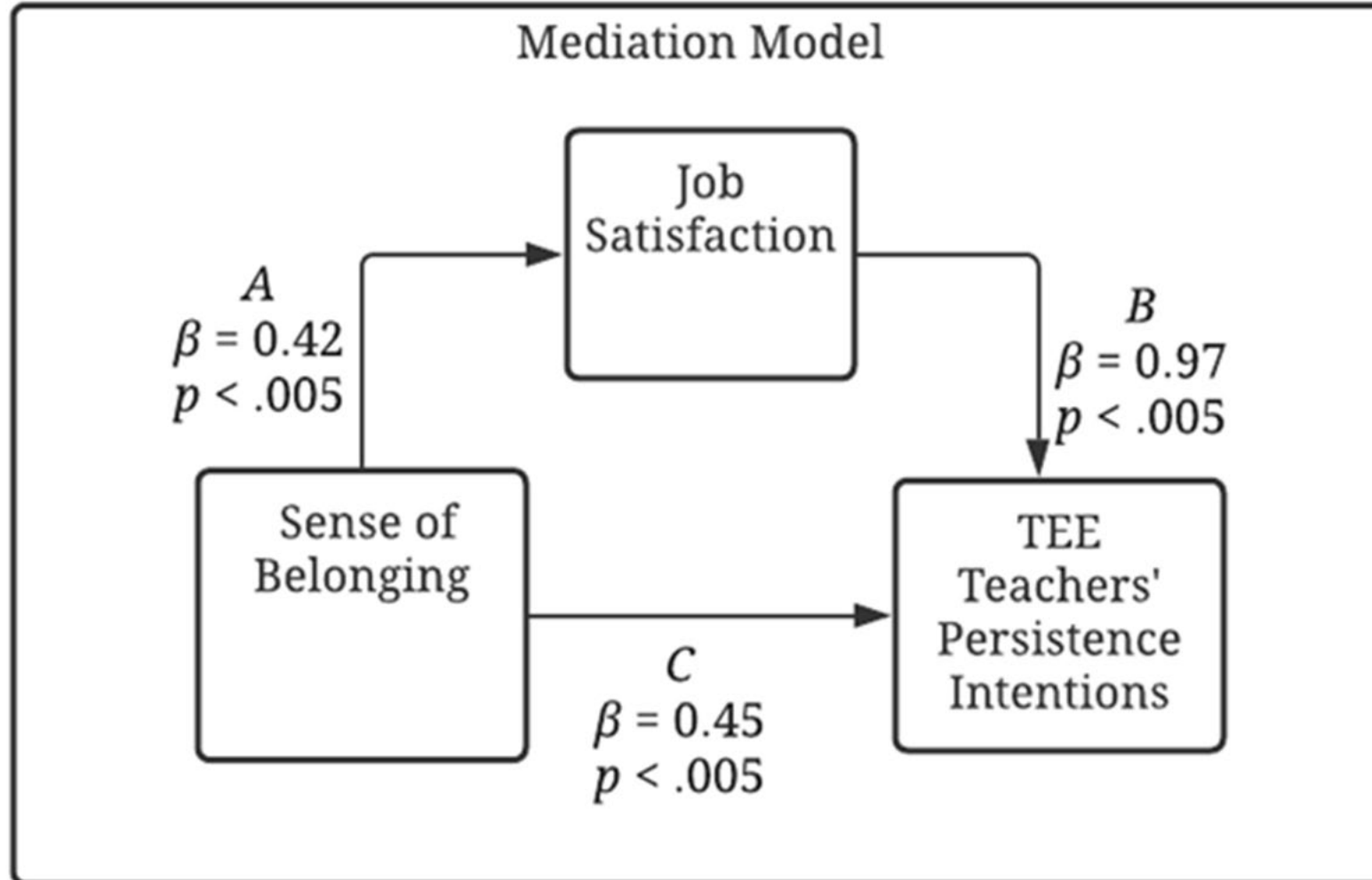
High teacher  
turnover



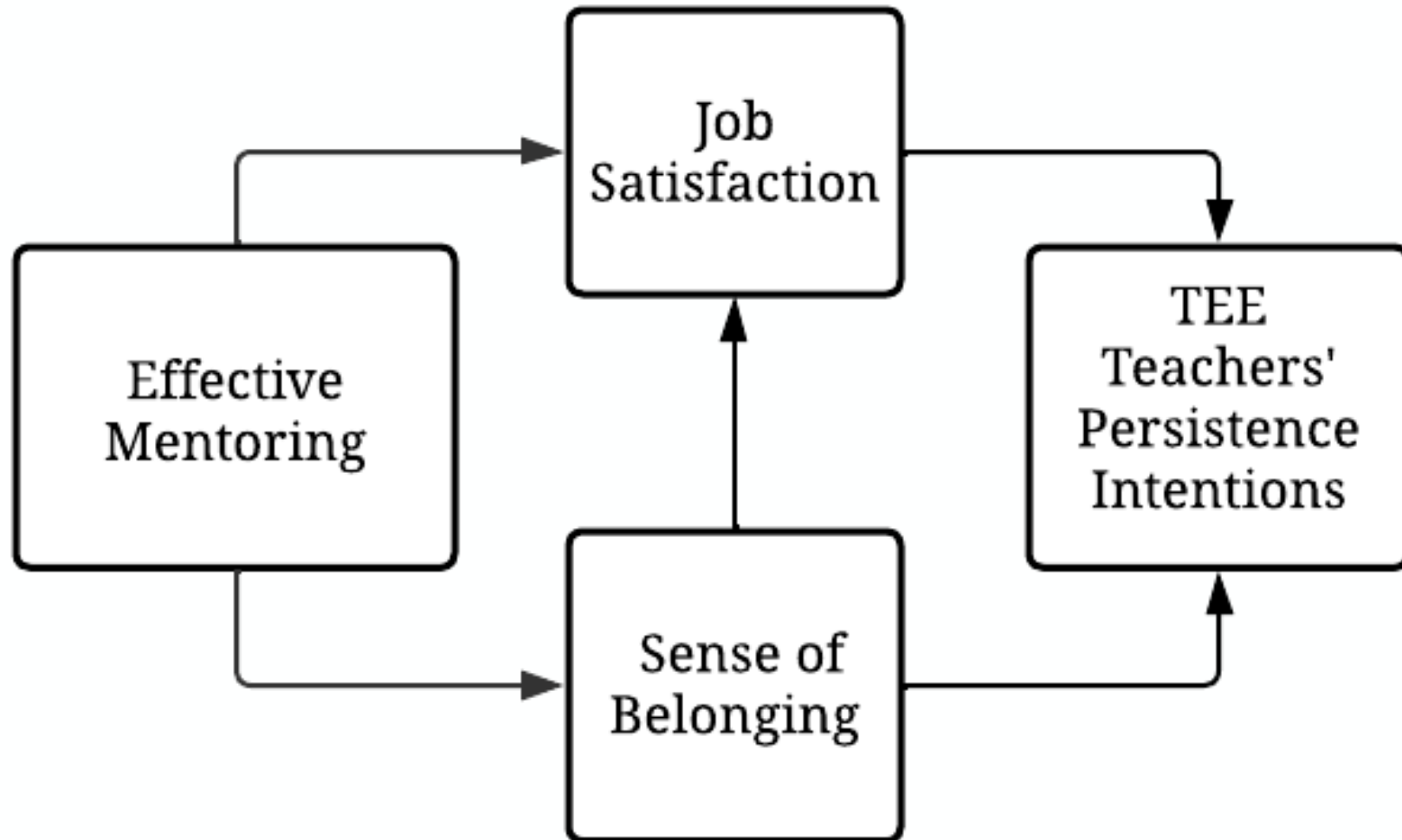
Decreasing supply of  
teachers (teacher ed)



# Background – Previous Work



# Conceptual Framework



# Key Questions

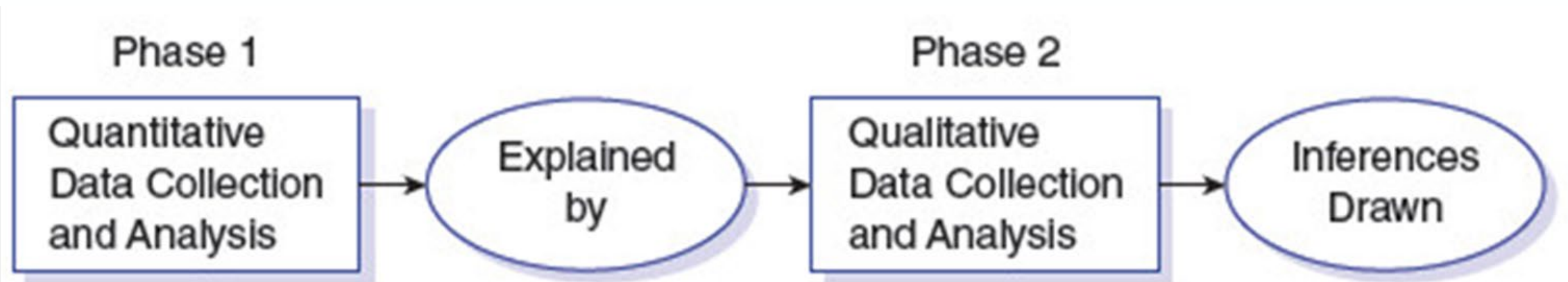
1. Type of mentorship activities available to teachers (*QUAN*)
2. The relationship between participation in different types of mentorship and the sense of belonging, job satisfaction, and persistence of teachers (*QUAN*)
3. What are teachers' experiences with mentoring opportunities? (*QUAL*)



# Methodology



# Framework



*Note.* From “A Concise Introduction to Mixed Methods Research” by J.W. Creswell, 2015, Thousand Oaks, CA: SAGE Publishing. Copyright 2015 by SAGE Publishing.



# Sampling – National Scope

- Inclusion Criteria
  - Teachers teaching TEE in first five years of career
- Teachers were contacted via email through listservs
  - ACTE's eTED Division
  - International Technology & Engineering Educators Association
  - CTE State Directors
- Total Response  $n=68$



# Interview Selection and Process

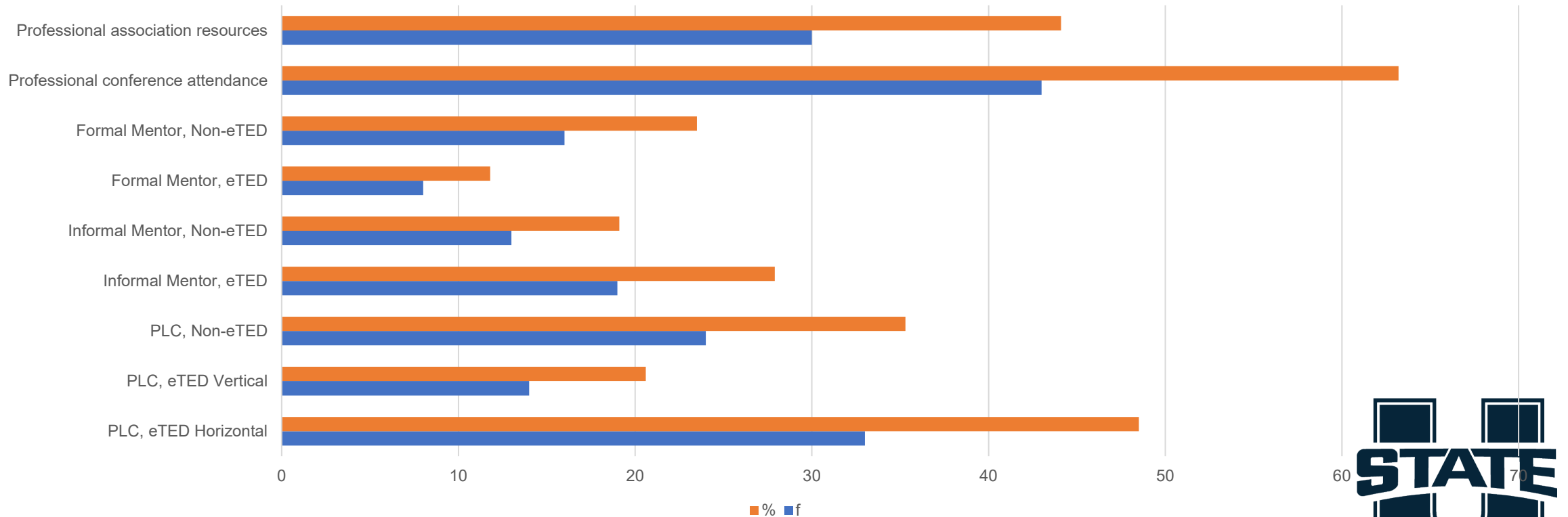
- When selecting participants for further interview, the following criteria were considered
  - Low-persistence
  - High-persistence
  - Association members
  - Not association members
  - Mid-career switchers



# Survey Findings

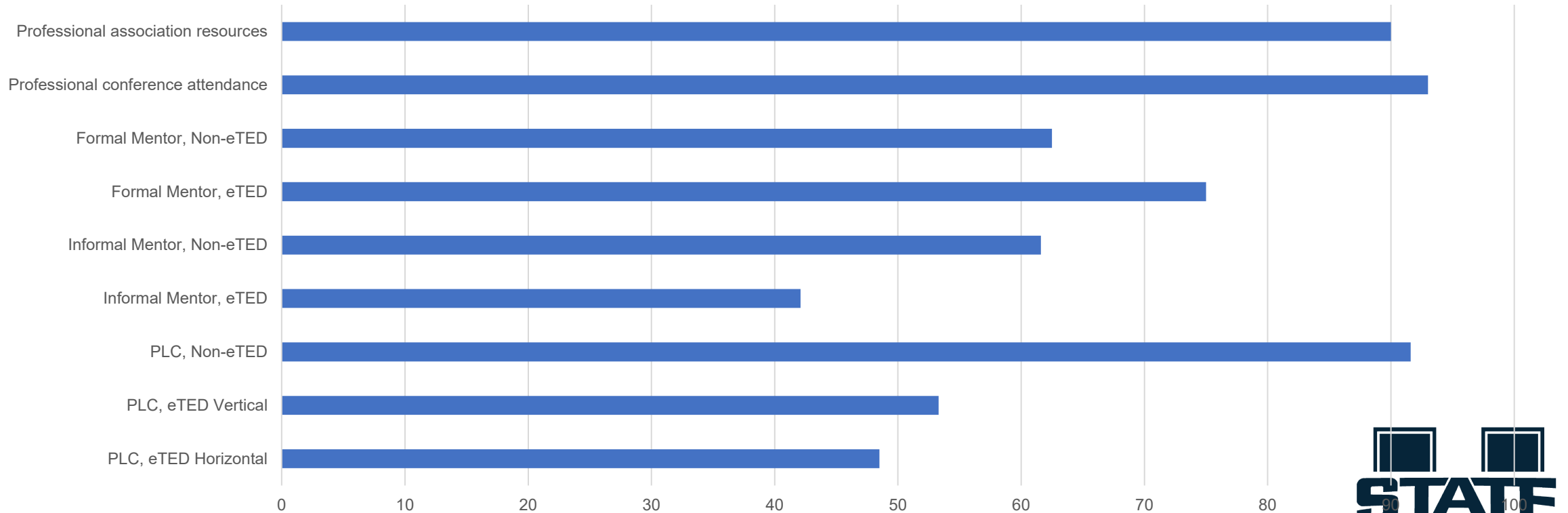
# Access to Mentoring Opportunities

Early-Career eTED Teachers'  
Access to Mentoring Opportunities



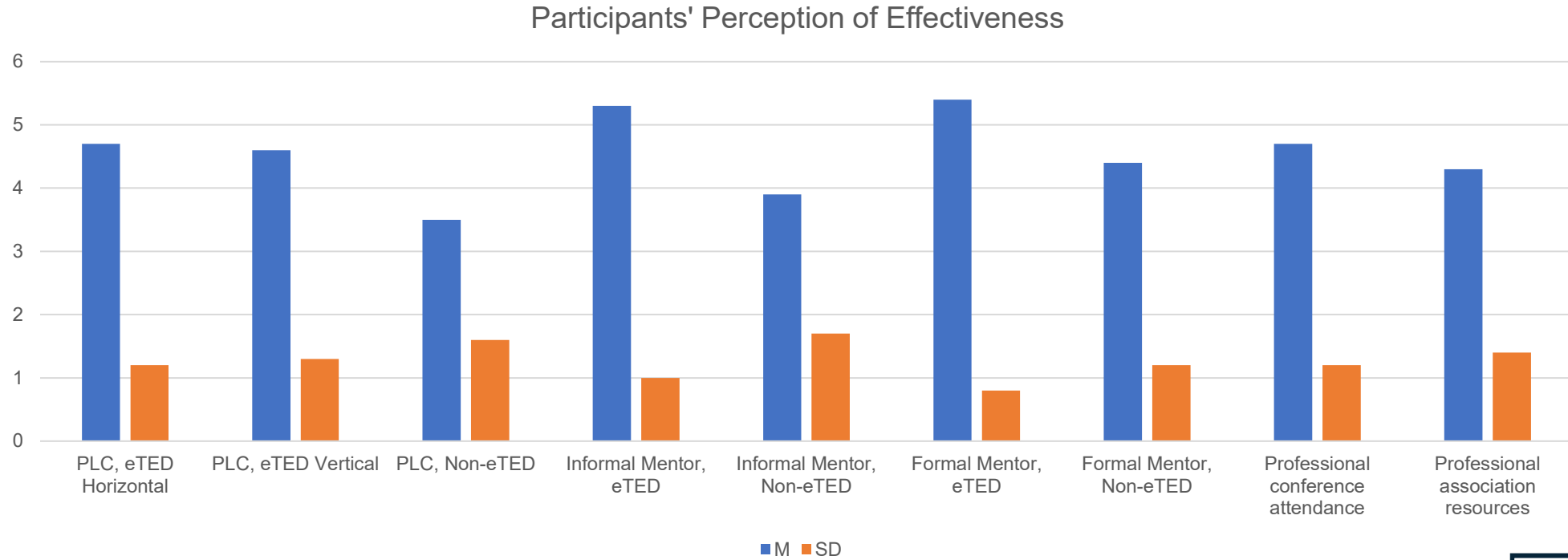
# Engagement with Mentoring Opportunities

Percentage of Participants Engaging Regularly\*



- “Regularly” was defined as once per month or more (or once per year for conferences/resources)
- Note: This is a percentage of those who said they had access to these opportunities

# Perceived Effectiveness



# Inferential Findings – Regression Models

Effect on Job Satisfaction	<i>B</i>	<i>SE B</i>	95% CI		<i>t</i>	<i>p</i>
			LL	UL		
Sense of Belonging	0.27	0.13	0.01	0.52	2.03	0.048
Non TEE PLC	-0.57	0.25	-1.05	-0.09	-2.31	0.025

Note. Adjusted R-Squared = .11; F-statistic: 4.454 on 2 and 52 DF, p-value: 0.016; CI = confidence interval LL = lower limit; UL = upper limit.

Effect on Sense of Belonging	<i>B</i>	<i>SE B</i>	95% CI		<i>t</i>	<i>p</i>
			LL	UL		
Job Satisfaction	0.21	0.12	-0.03	0.45	1.702	0.950
Non TEE Assigned Mentor	0.65	0.25	0.15	1.15	2.531	0.014

Note. Adjusted R-Squared = .13; F-statistic: 5.02 on 2 and 52 DF, p-value: 0.010; CI = confidence interval LL = lower limit; UL = upper limit.

Effect on Persistence	<i>B</i>	<i>SE B</i>	95% CI		<i>t</i>	<i>p</i>
			LL	UL		
Job Satisfaction	0.772	0.133	0.51	1.03	5.811	<0.001
Sense of Belonging	0.302	0.136	0.04	0.57	2.231	0.030
ACTE Membership	0.563	0.236	0.10	0.57	2.389	0.021

Note. Adjusted R-Squared = .487; F-statistic: 18.12 on 3 and 51 DF, p-value <.001; CI = confidence interval LL = lower limit; UL = upper limit.



# **Interview Findings**

# Qualitative Data and Analysis

- 43 survey respondents indicated willingness to be interviewed
- Purposive selection of interview participants (based on survey responses)
- Interviewed 5 participants
- Conducted thematic analysis



# Results of Thematic Analysis

- Varied pathways to teaching career
  - Uncertainty, search for fulfilling career, discovery of passion
- Role of mentoring
  - Both formal and informal
  - Guidance, teaching strategies, curriculum development, emotional support
- Importance of a sense of belonging
  - Support from colleagues, district PLCs, professional associations
- Professional Development
  - Conferences, workshops, and district PLCs
- Desire to impact students
  - Growth in problem solving and critical thinking skills
  - Preparing students for careers



# Challenges

- Strong sense of isolation among early-career TEE teachers at the school level
- Feel misunderstood by administrators and other faculty
- Alternatively licensed teachers struggle with developing curriculum, classroom management



# **Recommendations for Research and Practice**

# Recommendations for Research

- Larger studies (more effective sampling strategy?)
- Studies that specifically focus on supporting ARL teachers
- Characteristics of effective mentoring practices for eTED teachers (e.g., what makes an effective PLC?)
- Identification of effective supports from professional organizations



# Recommendations for Practice

- Every early-career eTED teacher should have an assigned mentor
- Teachers perceived that PLCs with other eTED teachers were most effective in supporting them
- More effective supports for ARL teachers (curriculum resources, teaching strategies)
- Recruiting should highlight ability to impact youth



**Questions?**





# Thank You

For more information on previous research, including the development of the measures used for this study, please see:

Ortiz, C.J. (2022). *What keeps technology and engineering teachers in the classroom: A national mixed-methods study*. [Unpublished dissertation, Utah State University]. <https://digitalcommons.usu.edu/etd/8410>

Additional articles on this research are in process. Feel free to reach out with more questions/comments, or if you want to collaborate:

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