



***LEARNING SESSION:***

**MENTOR ME! MENTOR YOU!  
STEM PEER MENTORING FOR  
EQUITY AND INCLUSIVITY**

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***STEMx: THE STEM INNOVATION FORUM 2023***

# CURRENT LANDSCAPE OF STEM EDUCATION

- Disparate representation of women and individuals identifying as racially and/or ethnically minoritized remain underrepresented in STEM (NCSES, 2023,
- Diversity of students enrolled in elementary, secondary, and post-secondary education is projected to increase
- Current enrollment in undergraduate and graduate STEM programs is increasing in diversity, but not at a pace representative of the current population (NCSES, 2023)

**The problem** is that current interest and pursuit of STEM degree does not meet projections for future need **and**, the diverse national and international population is inequitably represented among STEM fields.





# OVERVIEW OF THE eSTEM PROGRAM

# PURPOSE OF THE OVERALL PROGRAM

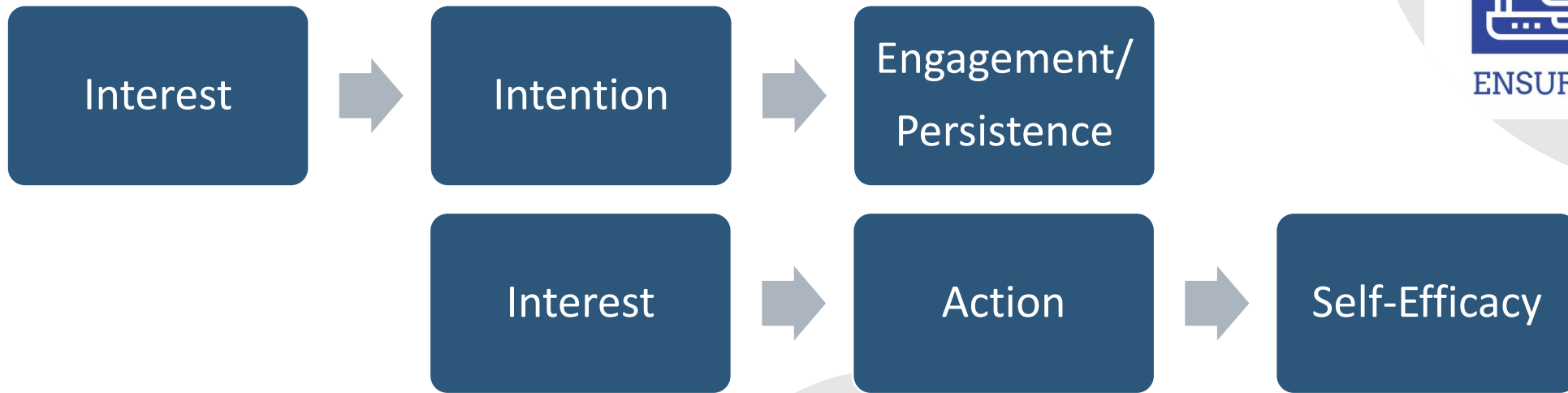
- Collaborative effort between three HBCUs
- Result of 2 previously funded NSF projects (Award #1717082, #1912205)
- Consists of the development, implementation, and evaluation of an online peer mentoring program, eSTEM, to broaden participation in STEM degree programs and careers
- **Peer mentoring** is “a reciprocal, dynamic relationship between or among peers where one peer is usually more skilled or experienced than the other” (Rockinson-Szapkiw et al., 2021, p. 2)

**The goal** was to examine the efficacy of the eSTEM program to assist racially and ethnically minoritized students—including women and minoritized men--in developing mentorship and leadership skills that are culturally responsive; STEM self-efficacy; sense of belonging; science identities; and, ultimately to promote their STEM degree and career persistence.



# THEORETICAL & CONCEPTUAL FRAMEWORKS

- Grounded in Social Cultural Career Theory (Lent et al., 1994)



- Modules designed with three main components:
  1. Topical discussion
  2. Case study
  3. Personal application/reflection



# OVERALL FINDINGS

- Increases in:
  - STEM self-efficacy
  - Sense of belonging
  - Interest in STEM
  - Intent to persist in STEM
  - STEM identity
  
- Practical implications:
  - Increased support of historically marginalized populations
  - Increased retention of students at institutions of higher education





# EXPLORE THE TRAINING

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# NEXT STEPS

- Implementation at a broader array of HBCUs
- Implementation at other minority serving institutions (MSIs)
- International considerations
- Potential Expansions/Additional Offerings
  - Faculty-Student Mentoring Training
  - K-12 STEM Peer Mentoring
  - Post-Secondary Peer Mentoring Training Outside of STEM
  - Teacher Peer Mentoring





# SELECTED REFERENCES

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