



THE OHIO STATE UNIVERSITY

Know Your Assets:

Advising & EDICTS

(Enhancing Diversity in Career and Technical STEM)

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NACADA Region 7
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Overview



- Introduction
- Learning Objectives
- EDiCTS Project
- Themes
- Next Steps



Introduction: Study Team



Dr. Matthew Mayhew



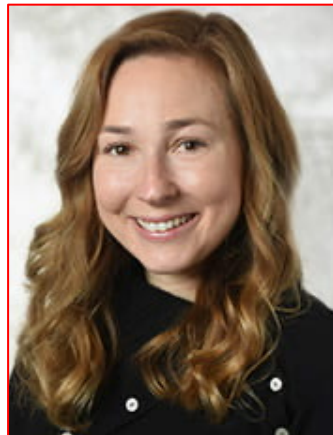
Dr. Emily T. Creamer



Yun-Han Weng



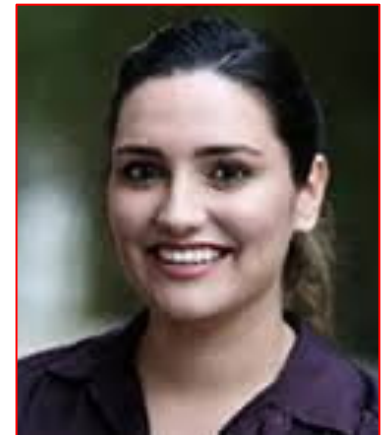
Musbah Shaheen



Susannah Townsend



Allan Sells



Jossie Munoz



Learning Objectives

1. Describe the purpose of this study and the research methods, helping to educate folks on educational research that transitions theory into practice.
2. Identify elements that fit into Astin's IEO Model and apply them to the EDiCTS project (aka a real-world situation).
3. Be able to articulate themes from preliminary findings from quantitative and qualitative data.



Let's Talk About Education Research





Let's Talk About Education Research

positionality
casestudy
survey chisquared
participants data anova
p-value irb spss focusgroups
mixed-methods
generalizability interviews regression
experiences quantitative qualitative
phenomenology coding



What is the EDiCTS project?

Partnership between:

- The College Impact Lab (CoIL) at The Ohio State University (OSU)
- The Ford Motor Company
- The ECMC Foundation
- Community Colleges who have Ford's Automotive Student Service Educational Training (ASSET) program



What is the EDiCTS project?

- A mixed-method study
- A program evaluation

The graphic features the word "ASSET" in large, white, sans-serif capital letters. Below it, the full name "Automotive Student Service Education Training" is written in a smaller, white, sans-serif font. The background is a dark blue, semi-transparent image of an engine compartment with various mechanical parts visible.

ASSET

Automotive Student Service Education Training



Problem

- Longstanding need to improve retention and persistence in automotive career & technical education (CTE)
- Racial and gender diversity in CTE fields remains mismatched with current national and automotive market demographics (Cagle et al., 2018; Estrada et al., 2016; Museus et al., 2011; National Center for Science and Engineering Statistics, 2019; National Academies of Science, Engineering, and Medicine, 2018)
- Community colleges struggle with low retention rates and large disparities between racial groups
- Persistence, retention, and graduation are understudied outcomes in the community college context when compared to 4-year counterparts
- Many models of retention in 2-year institutions are explicitly adapted with modification from more traditional 4-year retention models (Bean & Metzner, 1985; Tinto, 1975; Webb, 1989)



Problem summarized

- Lack of racial and gender diversity in career and technical (CT) fields
- Low retention of diverse talent in CT fields
- Low retention and matriculation of students at community colleges



Purpose

- To **increase** the degree of minority talent in the automotive sector workforce, driving demographic transformation in the sector that will increase innovation, cognitive performance and group decision making, efficiency, and cultural competence, and readiness for a diverse, globalized business environment.

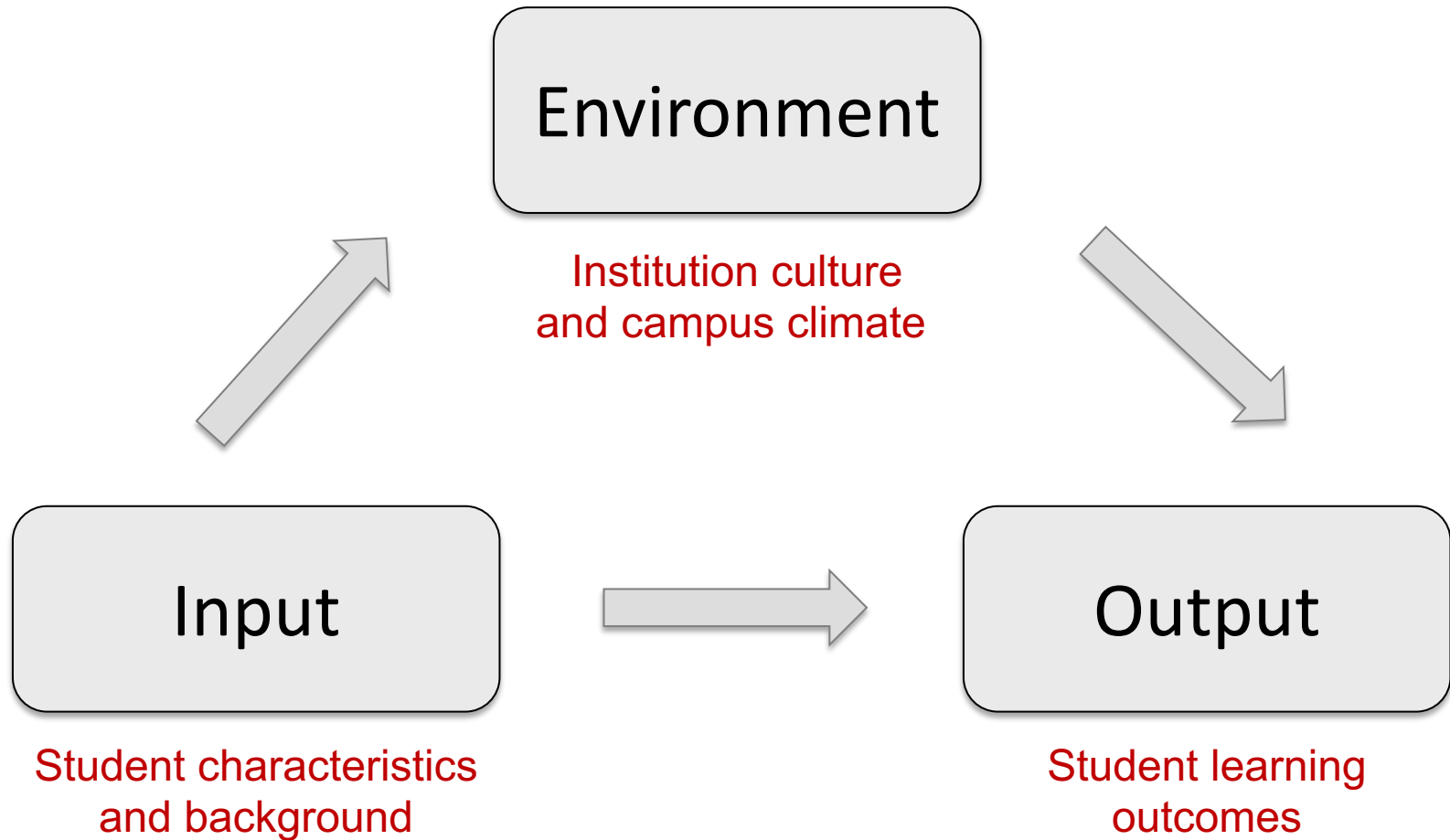


Research Questions

- Is the ASSET program **effective** at helping students succeed by way of their retention, persistence to degree, degree completion, and automotive workforce entry?
- What specific institutional **conditions** and educational **experiences** support the retention, persistence, degree completion, and workforce entrance of ASSET students who identify as women, Latinx, Native American, Black, and/or multi/mixed-race?
- What are the **effects** of institutional financial/material and extra-curricular support upon student retention, persistence, degree completion, and automotive workforce entrance of ASSET program students?

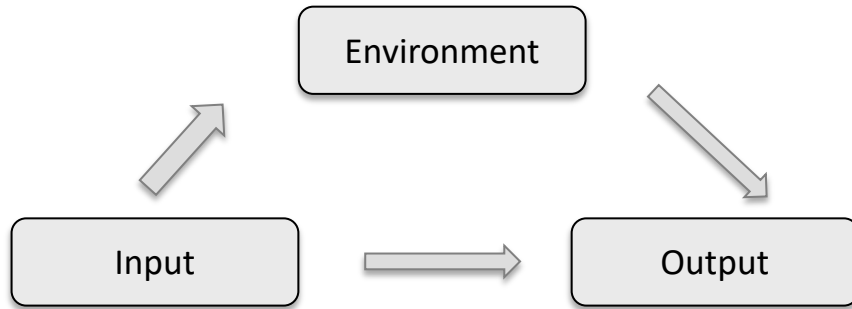


Theoretical framework: Astin's IEO Model





Activity:



Astin's IEO Model

- Population:
 - Community college students in automotive technology programs
- Output:
 - Graduated with an associate degree in automotive technology
 - Employment in as an automotive technician

In pairs or small groups, introduce yourself and share (if/when comfortable):

- Name
- Pronouns
- Job and job duties (what types of students do you work with)
- Experience with educational research



Significance of the Study

This study will help ASSET programs diversify talent in the potential automotive STEM technician workforce and train students in environments that support their retention and attainment

With the high demand for skilled trade professionals, this study will provide insight into the successes, challenges, and barriers for folks (specifically women and People of Color) who desire a degree and career in automotive technology.

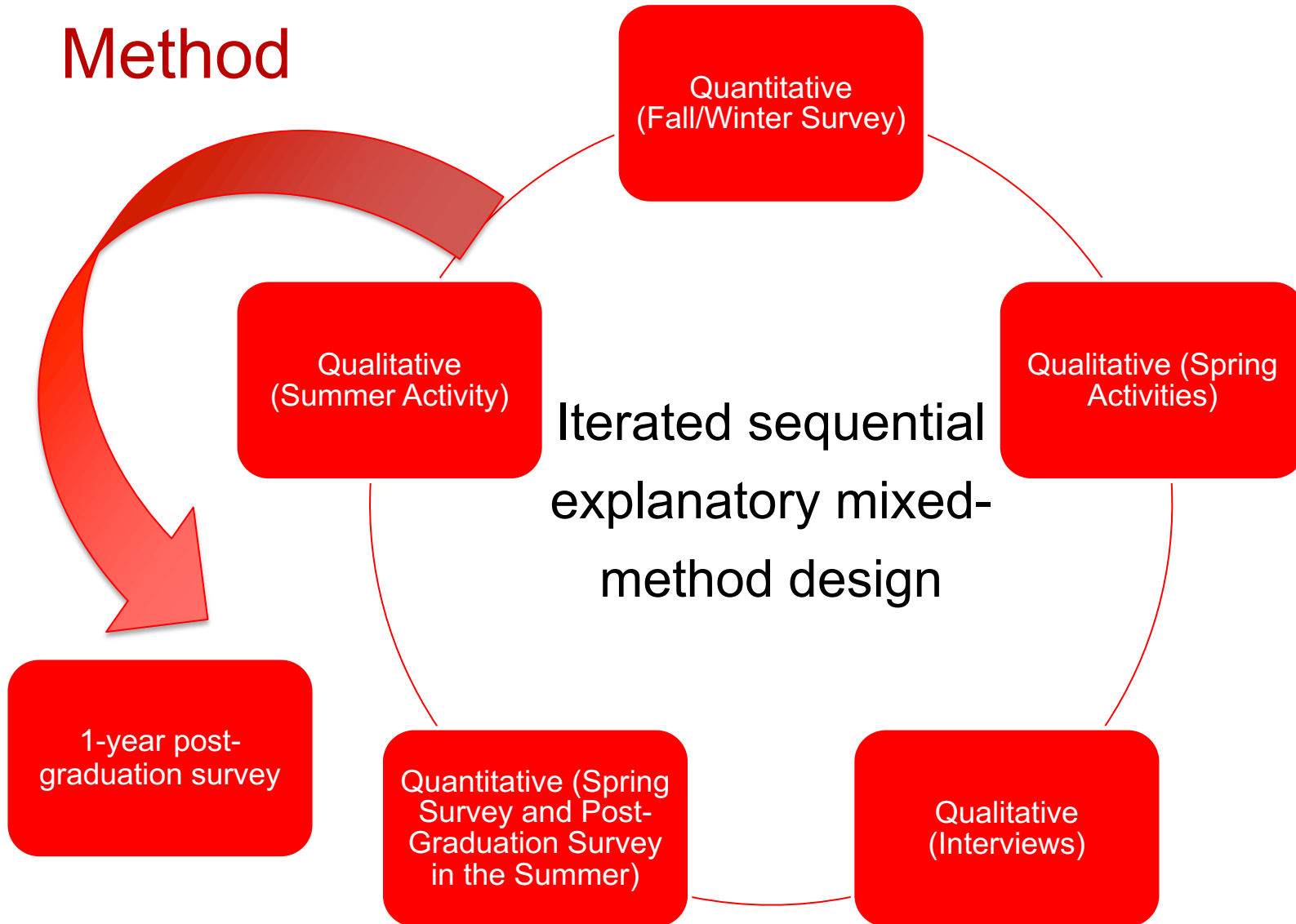


Method





Method





Method-Activities

Activities

Goal Setting	Learning Self-Assessment	Evaluation Interview and Self-Reflection
Students will engage in a writing task to define a set of academic, work, and social goals. Students will meet with their academic advisor to discuss performance and goal attainment.	Students will write a self-assessment of their weaknesses and strengths in the ASSET program. Students will subsequently meet with a faculty member or an internship mentor.	Students will complete at least one hour of interviews regarding their collegiate experiences each academic year to promote self-reflection and gather evaluative data.
Social Event	Evaluative Cohort Gathering	Financial Incentives
Students will attend a one-hour social event that includes students in both years, faculty members, and internship mentors during the summer semester once each year.	Students will attend a one-hour cohort gathering discuss and develop peer support networks, interpersonal resources, and coping strategies that promote persistence.	Students will receive a \$200 engagement fund after they have completed one semester of the project activities. The fund will be renewed every year students remain in the program.



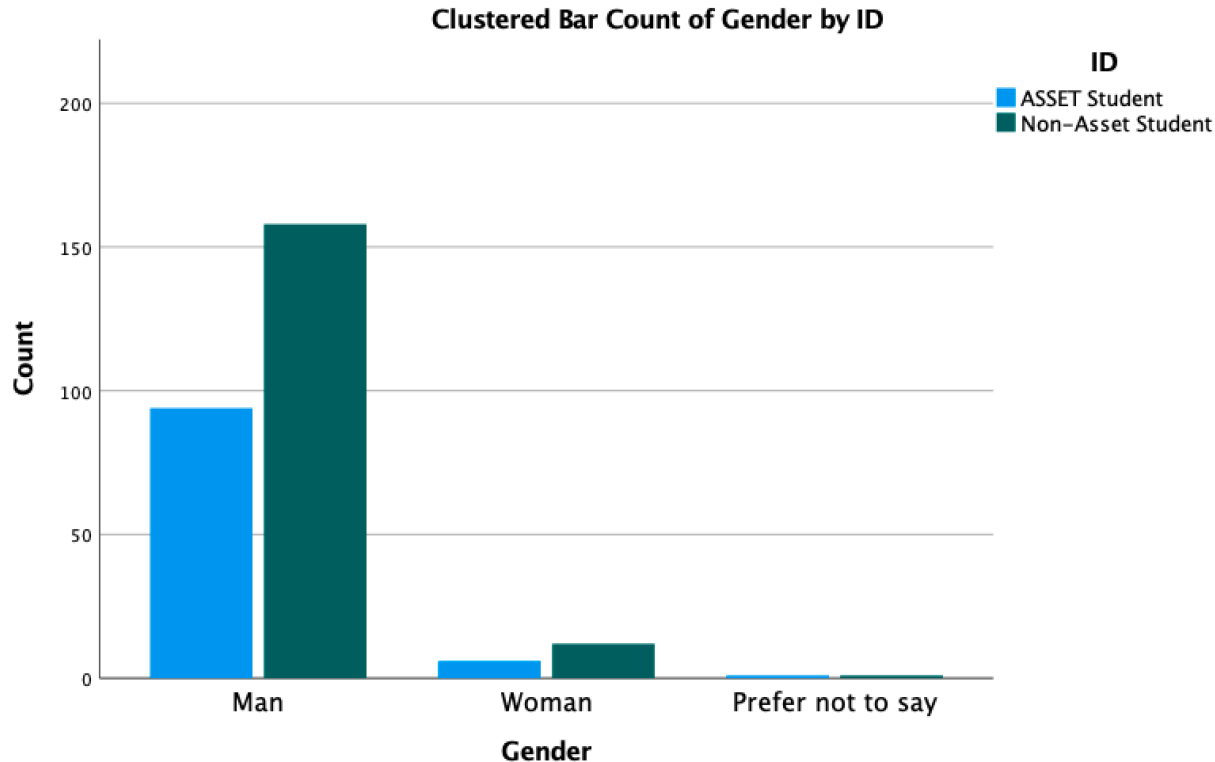
Participants





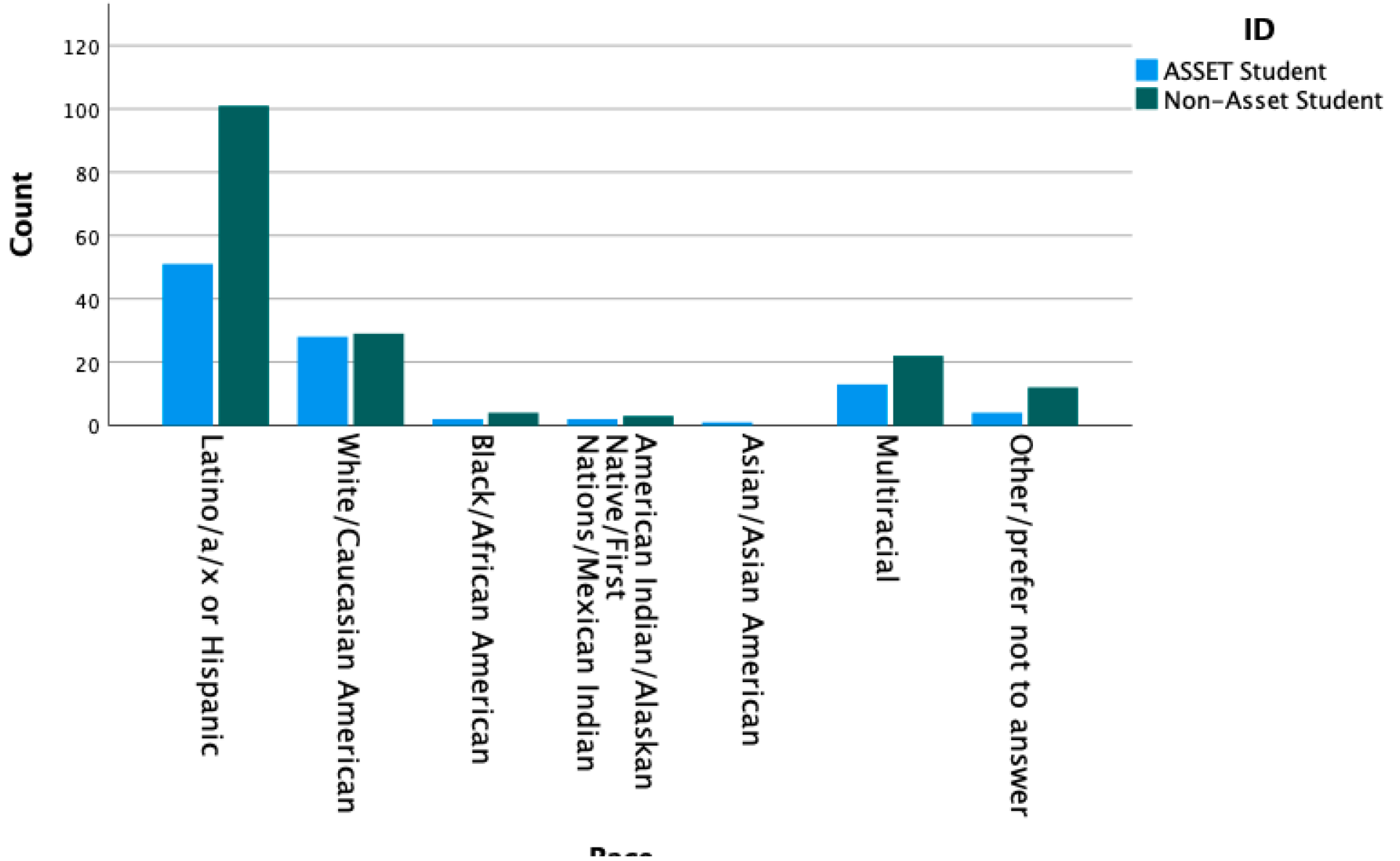
Participants

- Community college students from the south-central USA
- ASSET students: 101 (response rate of 71% from 151)
- Non-ASSET students: 171



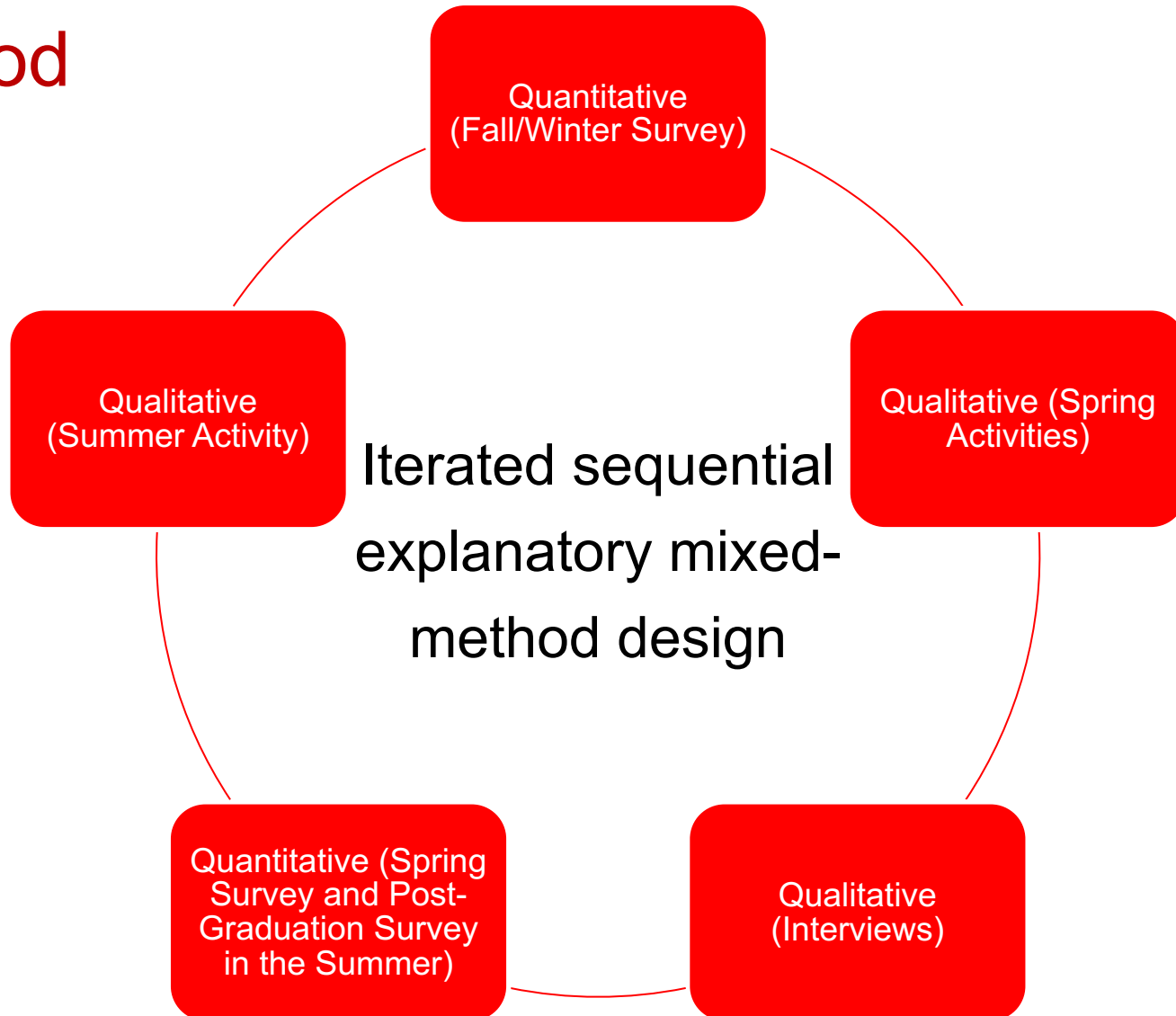


Clustered Bar Count of Race by ID





Method





Method-Activities

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Activities: Goal-Setting

- SMART Goals are Specific, Measurable, Achievable, Relevant/Realistic, and Time-Bound.
- Goal setting is predicted to enhance student goal commitment (Halpin, 1990) and to allow students to benefit from more intensive academic advisement (Hatch & Garcia, 2017).

How do you set goals with your students?

How do you or students track those goals?



Activities: Goal-Setting

Preliminary results (quant):

- The majority of EDiCTS students:
 - Met their advisor in-person at least 1 time during the fall or winter semester.
 - Said that either the advisor reached out to them for an appointment or that “we both reached out” (about $\frac{1}{4}$ said neither reach out)
 - Felt their academic advisor cares about their success as a student (about 80% felt this way)



Theme: Barriers to Success

In the goal-setting activity, participants were asked what obstacles may arise that can prevent them from achieving their academic goals:

- "My self-doubt will make me not want to come to school and learn."
 - "My biggest concern is that I procrastinate way too much and I always seem to push all my work last minute."
 - "Time is a very difficult issue for me due to work, school, and helping my family. I help my family by running all 3 of my younger brothers to different practices at different times. I also help my older brother when I babysit my niece."
- "1.) Exhaustion due to work
2.) Varying degrees of success with internet connection
3.) Personal obligations that take up time during the week"



Activities: **Self-Assessment**

- Self-assessment of their weaknesses and strengths in relation to the ASSET program.
- Meet with a faculty member or an internship mentor to discuss how the ASSET program can be improved to better support their success.
- This element has been documented to enhance community college success (Mertes, 2015)

**How do you encourage mentoring relationships?
What's the value of mentoring relationship for
community college students?**



Activities: Self-Assessment

Preliminary results/themes:

- The majority of EDiCTS students:
 - Felt like they had a faculty or supervisor mentor (almost 1/3 shared they met with the person 4 or more times in the fall/winter)
 - Said that “we both reached out” to set up an appointment (2/3rds of them)
 - Felt their mentor cares about their success as a student (over 90% felt this way)



Theme: Sources of support

In the self-assessment activity, participants were asked who can support them while they are in the ASSET program:

- "I feel like this one is all on me. I don't think there is someone that could support me with that. Maybe my girlfriend but it's mainly me, in my opinion."
- "My friends and family. My instructor gives support almost 24/7."
- "I could always my classmates to help me stay focused and I could ask our teacher to help keep engaged by asking me questions."



Next Steps: EDiCTS

- Finish data collection
 - Quantitative:
 - Survey 1 (now)
 - Survey 2 (end of spring semester)
 - Qualitative:
 - Self-Assessment activity
 - Goal-Setting activity
 - Individual interviews
 - Focus groups
 - Site visits
- Repeat for 2023-2023



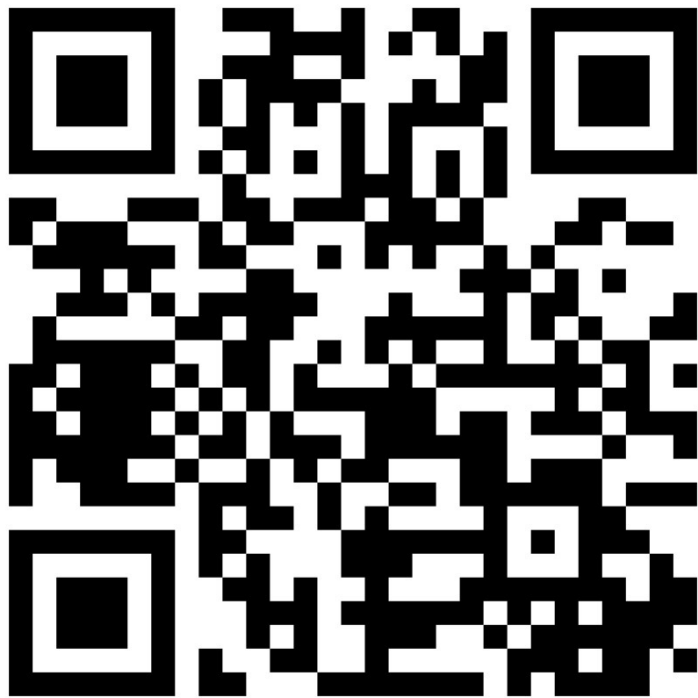
Next Steps for you

Q1. What strategies can you implement to better align your advising practices with the theory /activities discussed today?

Q2. In what ways can the research project discussed today help you to better understand the needs and goals of your advisees?



What's your main takeaway?



Scan me





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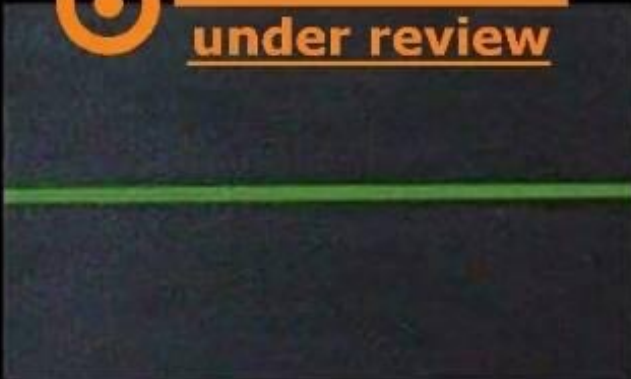
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Normal heartbeat

 **HIPM**
under review



Deceased heartbeat



Time to get
questions after your
conference talk



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