

SIPARCS PROGRAM EVALUATION PROPOSAL

Presented By:
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Self-Introduction



Hello! My name is Prashansa Agrawal.

- **I am a 2nd year masters student at The University of Texas at Austin**
 - **Higher Education Leadership and Policy**
- **I grew up in Southern California**
- **Background in Education and Psychology**
- **Passions: Supporting students through professional and leadership development.**





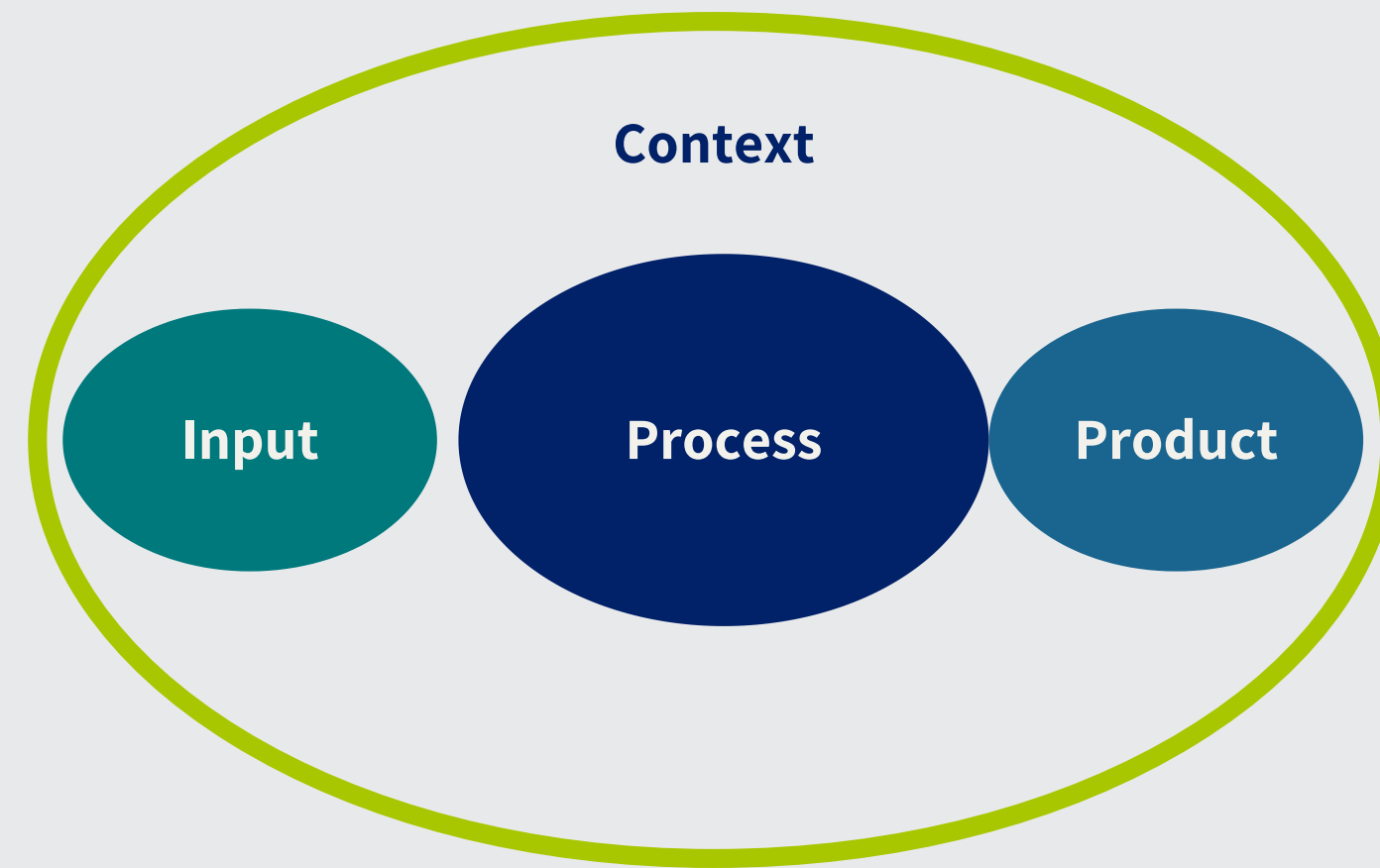
AGENDA

- 01** Evaluation Background
- 02** SIParCS 2025
- 03** SIParCS Evaluation Proposal
- 04** Implications and Future Directions

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EVALUATION BACKGROUND

What is Program Evaluation?



- Form of Research
 - Is it efficient?
 - Is it effective?
- There is no one size fits all ([AEA, 2025](#)).
- Context, Input, Process, and Product (CIPP) Model (Mertens & Wilson, 2012)

What is the Purpose?



Competency Categories:

1.0 DOMAIN PROFESSIONAL PRACTICE

2.0 DOMAIN METHODOLOGY

3.0 DOMAIN CONTEXT

- **Context of environment, power, and values/beliefs**

4.0 DOMAIN PLANNING & MANAGEMENT

- **Determine what components are necessary to conduct and complete an evaluation**

5.0 DOMAIN INTERPERSONAL

(American Evaluation Association, n.d.).

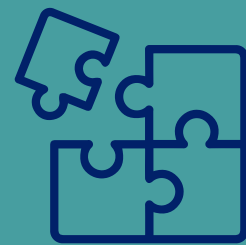


SIPARCS 2025

PROGRAM OVERVIEW

Introduce

- Transition from Academic Space → Work Force

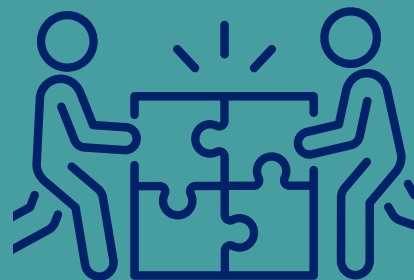


Train

- NCAR Staff practice mentorship and teaching ability
- Student interns learn technical skills

Development

- Leadership
- Mentorship
- Professional



Network

- Horizontal Growth
- Balance between formal and informal
- Open space for candid conversation

Student Success Frameworks

Transition Theory Model

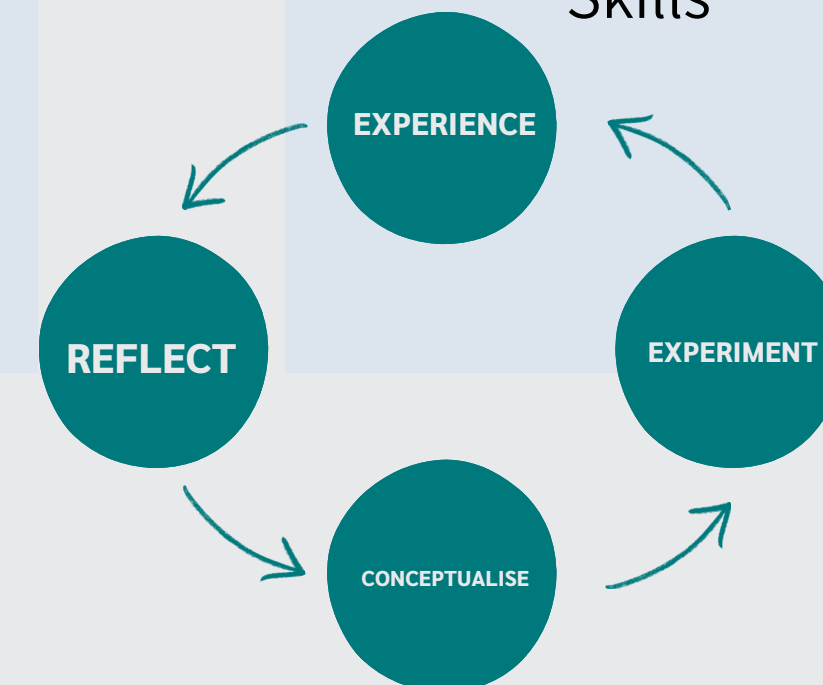
- Enduring changes over a period of time
 - Academics → Workforce
 - Support Mechanism
 - Cohort, Student life, Professional Development, Essential Skills
- (Schlossberg, 2011)

STEMM Mentorship

- Autonomy + Personal Growth = Safety Net
 - Significantly aids self-efficacy in science identity
 - Effective Mentorship
 - Flexible
 - Supports all types of development
- (Gray et al., 2024; National Academies of Sciences, Engineering, and Medicine, 2019)

Experiential Learning

- Beyond the classroom
- Hands-on concrete work
- Reflection is key
 - Technical and Essential Skills



(Akella, 2010)

LOGIC MODEL

SIPARCS CONTRIBUTION TO TRANSITION FROM STUDENT TO NEW PROFESSIONAL

PURPOSE: Promote positive work-force development in High Performance Computing (HPC) related areas through student intern transition into new professionals.

REACH

Interns
(Mentees)

Staff
(Mentors)

Program
Coordinators

INPUTS

- Time
- Effort
- Commitment
- Open-Mindset

- Projects
- Deliverables
- Timeline
- Daily supervision and mentorship

- Funding
 - Travel funds
 - Housing
 - Salary
- Administration
 - Training/orientation materials
 - hiring committee
 - data collection tools
- Events & opportunities

ACTIVITIES

- Professional Development Workshop
- Weekly check-in with mentors

- Weekly check-in with mentees
- Monthly mentor community meet-ups

- Conferences
- Fieldtrips
- Community building
- Weekly intern cohort check-in

OUTPUTS

- 10 Professional Development Workshop
- 2 weekly formal meetings with mentor

- Mentors attend optional MCM
- At Least 2 weekly formal meetings with mentee

- Student engagement and participation
- 2-3 multi-medium check-points to individually gather intern feedback

SHORT (Individual Level)

- Increase interns technical and soft skills
- Mentors communicate weekly with interns on technical and non-technical subjects

- Program evaluators receive feedback to be implemented throughout internship

OUTCOMES

MEDIUM (Period of time)

- Interns increase their skills and confidence in a professional work space
- Interns increase their technical knowledge in their project topic
- Mentors develop teaching, communication, and supervisory skills
- Develop methods to identify successful tools, strategies, and materials

LONG (Overall)

- Candid conversation between professional staff and interns.
- Strong SIParCS Network
- Positive influence on the quality and development of future HPC workforce

ASSUMPTIONS

- Interns benefit from some of the listed activities
- Interns participate in all activities
- Mentors are trained prior to interns arrival
- Mentors attend the mentor community meetup
- Program Coordinators implement changes throughout the course of the internship

EXTERNAL FACTORS

- Changes in funding
- Mentor and mentee participation
- Program coordinators flexibility with each cohort

SIPARCS EVALUATION PROPOSAL

Theory of Change

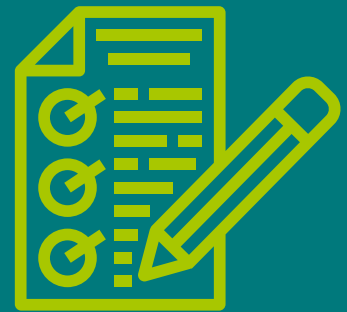


The program coordinators in SIParCS make adjustments to the methods and measurements that take place during the program...



... they will be able to improve the overall experience of stakeholders during the internship and prepare for future internship seasons to align with the principles outlined in student success frameworks.

EVALUATION APPROACH



Formative

- Examines a program's progress and improve its implementation for the duration of allocated time
- Typically based on feedback provided by stakeholders throughout (rather than only at the end)



Utilization-Focused

- Utilization Focused approach puts the intended users needs as the primary goal and works to enhance their experience (Patton & Campbell-Patton, 2021)
- Not create any new methods or models rather match the intended users and ensure the stakeholders evaluation is effective (Mertens & Wilson, 2012)

EVALUATION QUESTIONS



1A

- How does participation in the SIParCS program impact the stakeholders' **development**?



1B

- How does participation in the SIParCS program influence stakeholders' **attitude towards** their participation in the **organization**?



2

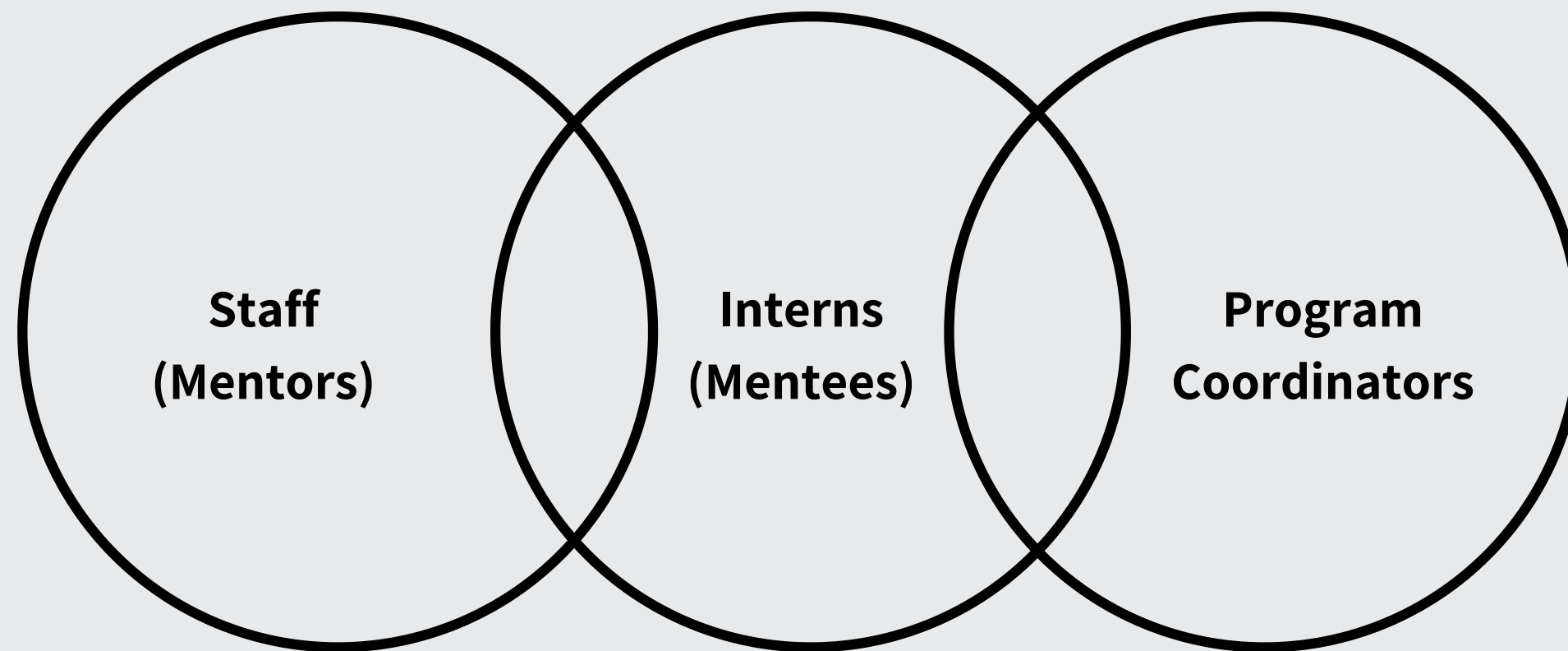
How can **feedback** for participation in SIParCS be done **effectively and efficiently**?

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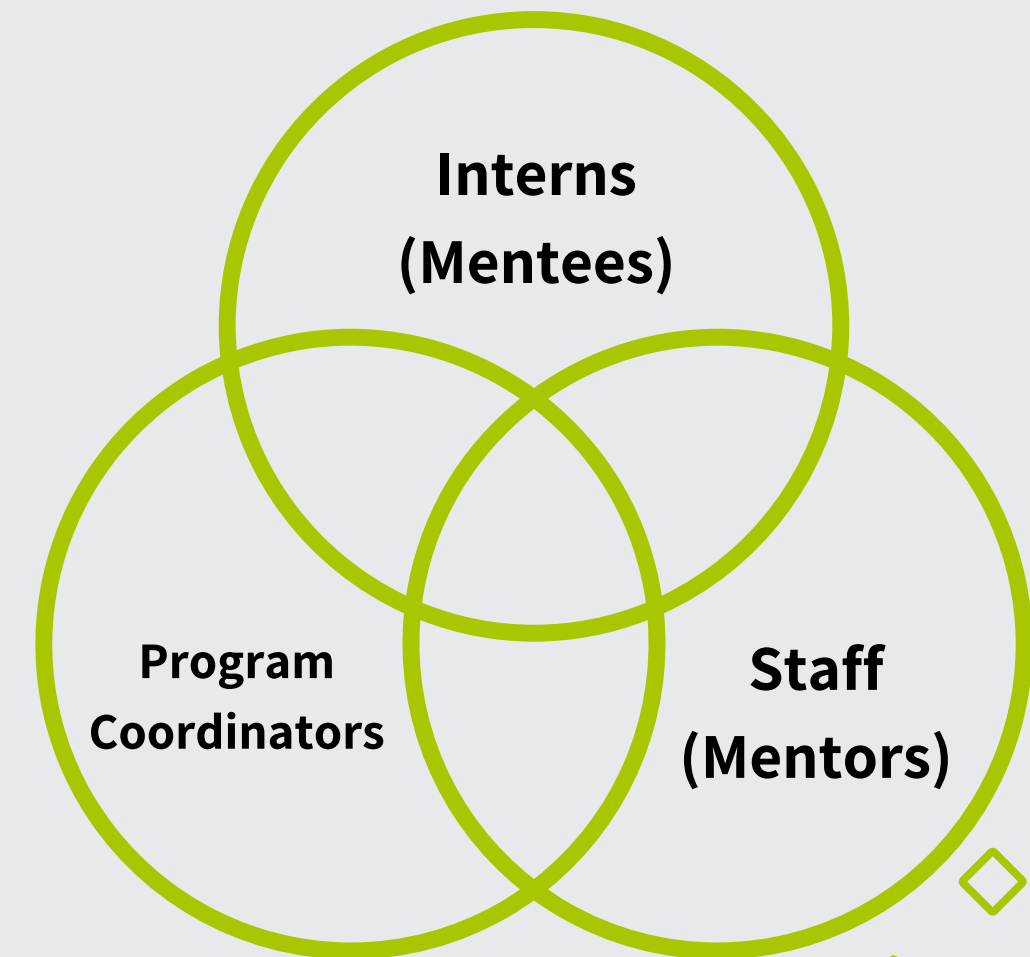
IMPLICATIONS AND FUTURE DIRECTIONS

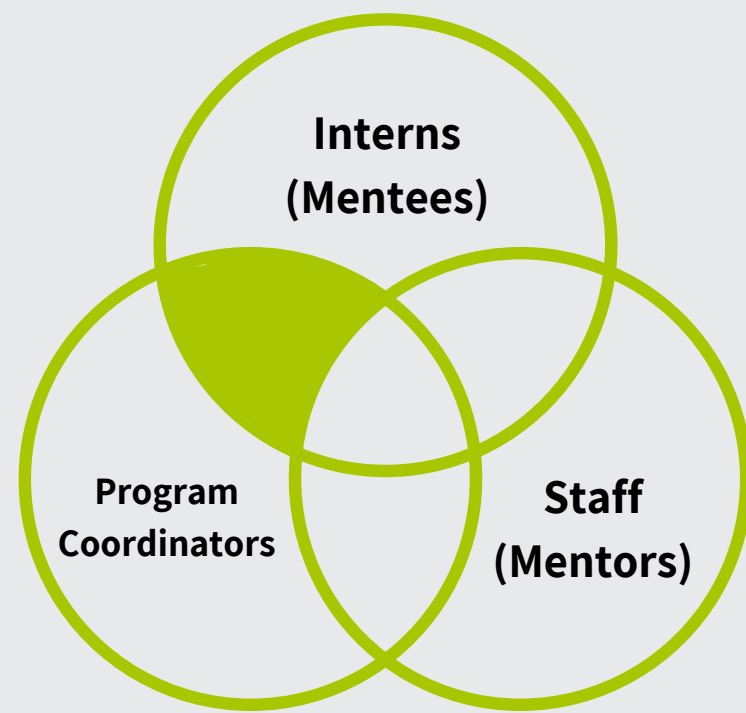
MENTORSHIP STRUCTURE

Current



Proposed





METHODS AND MEASUREMENTS

Mentorship Relation

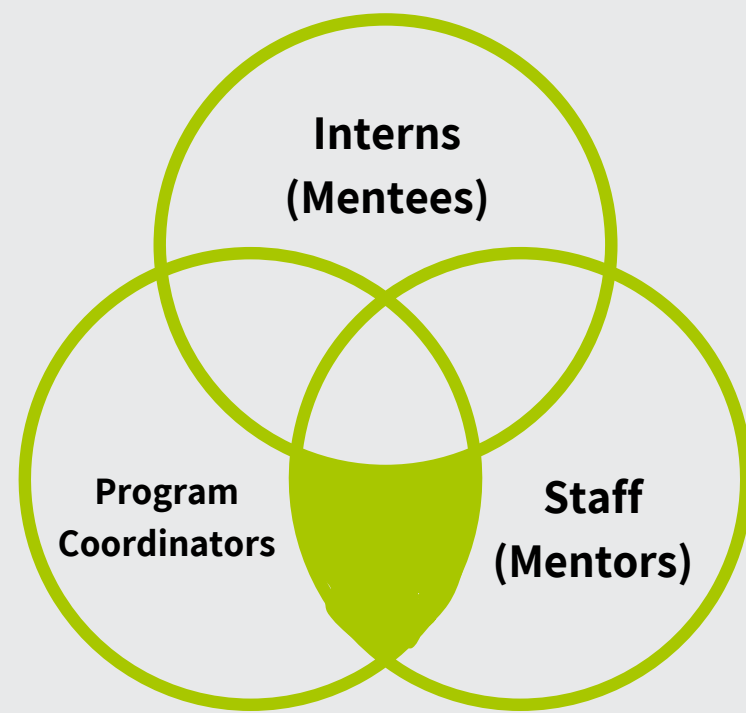
- Between Program Coordinators and Interns
- Formative Evaluation
 - Improvements to current cohort of interns experience
- Utilization - Focused
 - Enhance/Improve feedback collection

Outcome Impact

- Short Term (Individual Level)
 - Program evaluators receive feedback to be implemented throughout internship
- Medium Term (Period of Time)
 - Interns increase their skills and confidence in a professional work space

Measurement

- Weekly Check-ins → Focus Groups (weekly/biweekly)
- 3 checkpoints
 - Consistent Format
 - Qualitative Survey
 - Pre-, Mid-, Post-test



METHODS AND MEASUREMENTS

Mentorship Relation

- Between Program Coordinators and Mentors
- Formative Evaluation
 - Providing support in the form of essential skills and reflections
- Utilization - Focused
 - Initiate feedback collection

Outcome Impact

- Short Term (Individual Level)
 - Program evaluators receive feedback to be implemented throughout internship
- Medium Term (Period of Time)
 - Mentors develop teaching, communication, and supervisory skills

Measurement

- Focus Groups
 - MCM → Requirement
 - Consistent meetings between Program Coordinators and Mentors
- 3 checkpoints (Same rate as Interns)
 - Consistent Format
 - Qualitative Survey
 - Pre-, Mid-, Post-test

THANK YOU

- NSF NCAR
- CISL Outreach, Development, and Education Team
- Patricia Montaña
- SIParCS interns

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