

Appendix B: Research Participant Survey

Thank you for taking part in this study conducted by the IDA Science and Technology Policy Institute (STPI) on behalf of the National Science Foundation's Emerging Frontier in Research and Innovation (EFRI) program and the Engineering Research Centers (ERC) in the Directorate for Engineering. STPI is a Federally Funded Research and Development Center (FFRDC) that provides rigorous, independent research and analysis to the Federal government.

Purpose of the Survey

This survey solicits your perspective as a former research participant in the Research Experience and Mentoring (REM) program.

Confidentiality Statement and Instructions for the Survey

STPI is independent of the National Science Foundation (NSF) and has been contracted to collect these data. All responses will be kept confidential and protected to the extent possible by law. Only aggregate data will be provided to NSF and your survey responses will not be linked to you or your institution. Your decision to participate is voluntary and will have no effect on your current or future relationship with NSF.

The survey will ask for information about your experience as a REM research participant. The estimated survey completion time is 20 minutes. You will be able to move backward through the survey to review or edit responses. Your survey responses are automatically saved up to the last submitted page, so you will be able to pause and return mid-survey using the link provided. However, once you submit the survey, you will not be able to edit your responses.

If you would like to review information about the NSF REM Program, please visit <https://www.nsf.gov/eng/efma/rem.jsp>

Paperwork Reduction Act Burden Statement:

The public reporting burden to complete this information collection is estimated at [#] minutes per response, including the time for reviewing instructions. This collection of information is voluntary. An agency may not conduct or sponsor, and a person is not

required to respond to a collection of information unless it displays a currently valid OMB control number and expiration date. [OMB Control Number x, expiration date].

Inquiries and Concerns

If you are not the best person to complete this survey about the REM program, or if you have any questions or concerns about completing this survey, please contact us at REMeval@ida.org.

If you would like to verify the authenticity of this study with the NSF, please contact Dr. Alias Smith (alismith@nsf.gov).

Your responses are invaluable to the study. Thank you for your participation.

REM Award Information

Our records indicate that you were part of a REM program in [YEAR], at [INSTITUTION], working on [GRANT] with [PI].

Do you remember participating in this program?

- ☐ Yes, I remember
- ☐ No, I do not remember

Does the above information accurately describe the number of times you participated in the REM program, as well as the year(s), institution(s), grant(s) and PI(s) of your REM program(s)?

- ☐ Yes, the above information is accurate
- ☐ No, the above information is NOT accurate

[If No, the above information does not accurately describe my REM program(s)]

Please list the year(s) you participated in the REM program, and the institution(s) at which you participated.

Was the REM program your first research experience?

- ☐ Yes, this was my first research experience
- ☐ No, this was not my first research experience

Have you participated in other research experiences since the REM program?

- ☐ Yes, I have participated in other research experiences

- ☐ No, I have not participated in other research experiences

Which categories best describe your student or employment status during your REM program(s)? Please select all that apply.

- ☐ High School Student
☐ Community College Student
☐ Undergraduate Student
☐ High School Teacher
☐ Community College Faculty
☐ University Faculty
☐ Other____

Future Directions and STEM Retention

Please select the highest level of school you have completed.

- ☐ Less than high school- No Diploma
☐ High School Graduate- high school diploma or equivalent (for example: GED)
☐ Some college but no degree
☐ Associate degree in college - Occupational/vocational program
☐ Associate degree in college -- Academic program
☐ Bachelor's degree (For example: BA, AB, BS)
☐ Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA)
☐ Professional School Degree (For example: MD, DDS, DVM, LLB, JD)
☐ Doctorate degree (For example: PhD, EdD)
☐ Other____

{if any other than “High School Graduate, or Less than high school”} Is your current or desired job/educational program in a Science Technology Engineering or Math (STEM) field? A STEM field is defined by the NSF as having a Science & Engineering (S&E) or S&E-related bachelor’s or higher degree or who work in an S&E or S&E-related occupation.

- ☐ Yes, my current or desired job/educational program is in a STEM field
☐ No, my current or desired job/educational program is NOT in a STEM field

{If currently in STEM} Has the REM program contributed to your desire to study or work in a STEM field?

- ☐ Yes, the REM program contributed to my desire to study or work in a STEM field
☐ No, the REM program did not contribute to my desire to study or work in a STEM field

{If yes, it did contribute} You indicated that the REM program contributed to your desire to study or work in a STEM field. Please describe how below.

During your REM program(s), please describe how much or little did you:

	None	A little	Some	A fair amount	A great deal	N/A
Engage in real-world science/engineering research.						
Feel like a scientist/engineer.						
Think creatively about the project.						
Try out new ideas or procedures on your own.						
Feel responsible for the project.						
Interact with scientists/engineers from outside your REM program.						
Feel a part of a scientific/engineering community.						

Cohort

The REM program involves multiple participants at the same research institution each year. Were you aware that there were other participants in your REM program(s)?

- ☐ Yes, I was aware that there were other participants
- ☐ No, I was not aware that there were other participants

You indicated that you were aware that there were other REM participants in your program(s). Please select whether you agree or disagree with the following:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

I formed working relationships with other REM participants					
I continued my working relationships with other REM participants after my research experience(s) ended					
Other participants supported me in my STEM work/classes after my research experience(s) ended					
I supported others in my REM program in their STEM work/classes after my research experience(s) ended					
Other participants supported me staying in STEM after my research experience(s) ended					
I have encouraged others' to stay in STEM					
I did not interact with any other REM research participants					

After the summer research experience was completed, describe any additional aspects of the REM program that you engaged in.

Mentorship

Please select any activities below that you participated in during your REM program(s).
Select all that apply.

- ☐ Forming a professional relationship with a mentor
- ☐ One-on-one interactions regarding the design and conduct of my REM research
- ☐ One-on-one interactions regarding dissemination of the results of my REM research
(e.g., publication, presentation)
- ☐ Advice regarding which S&E classes to take in the future
- ☐ Advice regarding college or graduate school
- ☐ Career advice
- ☐ I did not receive any mentorship
- ☐ Other, please specify _____

{If any except “I did not receive any mentorship”} You indicated that you received mentoring during your REM program(s). What position were your mentor(s) in at the time of your REM program(s). Select all that apply.

- ☐ University Faculty
- ☐ Post-Doc/Research Scientist
- ☐ Graduate Student
- ☐ Undergraduate Student
- ☐ Community College Student
- ☐ High School Teacher
- ☐ Community College Faculty
- ☐ I don't recall
- ☐ Other_____

{If any except “I did not receive any mentorship”} You indicated that you received mentoring during your REM program(s). Please briefly describe the mentoring you received.

Thinking back to your REM program(s), please rate the following:

	Poor	Fair	Good	Excellent	N/A
My working relationship with my research mentor(s).					
My working relationship with research group members.					

The amount of time I spent doing meaningful research.					
The amount of time I spent with my research mentor.					
The advice my research mentor provided about careers or graduate school.					
The research experience overall.					

Did you attend, virtually or in person, the Emerging Researchers National (ERN) conference?

- ☐ Yes, I attended ERN
☐ No, I did not attend ERN
☐ I do not remember if I attended ERN

[if attended ERN]. You indicated you attended the Emerging Researchers National conference. Please indicate whether you agree with the following items regarding the ERN conference post-REM.

	Agree	Disagree
I presented at the broader ERN meeting		
I presented at the REM poster presentation held at the ERN meeting		
I formed relationships with REM participants at ERN that continued post-conference		
I have utilized tools that I learned at the ERN conference		
Participation in the ERN meeting influenced staying in STEM		

[if “agree” to “Participation in the ERN meeting influenced staying in STEM”]. You indicated that participation in the ERN meeting influenced you staying in STEM. Please describe how your participation in the ERN meeting influenced you staying in STEM.

[if “agree” to “I have utilized tools that I learned at the ERN conference”]. You indicated that you have utilized tools that you learned at the ERN conference. Please describe what tools you have utilized, and how you have utilized them.

Scientific Skills

How much did you gain in the following areas as a result of your REM program(s)?

	No Gains	A Little Gain	Moderate Gain	Good Gain	Great Gain	N/A
Thinking Like a Scientist						
Analyzing data for patterns.						
Figuring out the next step in a research project.						
Problem-solving in general.						
Formulating a research question that could be answered with data.						
Identifying limitations of research methods and designs.						
Understanding the theory and concepts guiding my research project.						
Understanding the connections among scientific disciplines.						
Understanding the relevance of research to my coursework.						
Personal Gains Related to Research Work						
Confidence in my ability to contribute to science.						

Comfort in discussing scientific concepts with others.						
Comfort in working collaboratively with others.						
Ability to work independently.						
Developing patience with the slow pace of research.						
Understanding what everyday research work is like.						
Taking greater care in conducting procedures in the lab or field.						
Gains in Skills						
Writing scientific reports or papers.						
Making oral presentations.						
Defending an argument when asked questions.						
Preparing a scientific poster.						
Keeping a detailed lab notebook.						
Conducting observations in the lab or field.						
Using statistics to analyze data.						
Calibrating instruments needed for measurement.						
Working with computers.						
Understanding journal articles.						
Conducting database or internet searches.						
Managing my time.						

Final thoughts

What else should we know about your experience with the REM program?

Demographics

Please indicate your race, select all that apply.

- ☐ White
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ Other –
- ☐ Prefer not to say

Are you of Hispanic, Latino, or Spanish origin?

- ☐ Yes
- ☐ No
- ☐ Prefer not to say

What is your gender identity (Check all that apply)

- ☐ Male
- ☐ Female
- ☐ Genderqueer/gender non-conforming/non-binary
- ☐ Different identity (please state): _____
- ☐ Prefer not to say

Have you ever served on active duty in the U.S. Armed Forces, Reserves, or National Guard?

- ☐ Never served in the military
- ☐ Only on active duty for training in the Reserves or National Guard
- ☐ Now on active duty
- ☐ On active duty in the past, but not now

Were you the first in your family to attend college? *Definition: neither of your parents completed a four-year degree.*

- ☐ Yes, I was
- ☐ No, I wasn't

Was English the primary language spoken in your home growing up?

- ☐ Yes, it was

☐ No, it wasn't

Thank you so much for your participation.