

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH STUDY:

“Characterization of Undergraduate Research Experience Work Design and Student Outcomes in STEM Research Teams”

Dear Undergraduate Student,

You are being asked to participate in the research study conducted by a research team that includes Dr. Anya Goodman and Dr. Andrea Somoza-Norton at Cal Poly San Luis Obispo and Dr. Dan Bachrach at the University of Alabama.

You were selected to participate because you indicated in the interest form that you are at least 18 years of age, have experience with undergraduate research in STEM at a primarily undergraduate college or university during an academic year. You and others may personally benefit from your participation. Your participation is voluntary.

PURPOSE OF THE STUDY

The purpose of this study is to investigate how the structure of work in the undergraduate research setting affects the personal and professional outcomes of students from diverse disciplines, institutions, identities, and experience levels.

POTENTIAL BENEFITS

Potential benefits to society and STEM education include a more comprehensive understanding of how undergraduate research experiences can be better designed to improve student experience and growth.

Potential benefits to individual participants include increased awareness of the benefits of undergraduate research (e.g. development of specific skills or relationships), as well as an understanding of the four dimensions of work design. Becoming aware of the four dimensions of work design and discussing their past experiences along these dimensions may help participants develop a mental framework and adopt vocabulary from organizational psychology for evaluating future job and career opportunities, and relating their past experiences (including likes and dislikes) to the future career choices.

PROCEDURES and YOUR PARTICIPATION

If you agree to participate, you will be asked to complete a short online survey (5-10 min) and participate in a virtual interview via Zoom with a member of our research team (approximately 1 hour).

The survey asks 12 questions about your research discipline, research group, amount of experience in research and in college, as well as three demographic questions (gender, racial and ethnic identity). The demographic questions will only be used in aggregate to characterize participants as a group and ensure that diverse voices and perspectives are represented in our study.

The interview will take place over Zoom and will be recorded. We are developing a survey for studying how work is organized in undergraduate research groups. During the interview, you will see the questions of the survey related to characteristics of work design and to student outcomes. You will be asked to answer the questions, to share with the research team your interpretation and thinking about the questions, and to elaborate on your past research experiences.

If you agree to participate, you will be giving us permission to analyze and report data resulting from your interview and participant survey.

PAYMENT FOR PARTICIPATION

You will not be paid for participating in this research, but you will receive a \$20 e-gift card of your choice via the Tango Card website after completing the survey and the interview.

PARTICIPATION AND WITHDRAWAL

You can choose whether to participate, and you may withdraw from the study at any time. Choosing not to participate or choosing to withdraw at any point will mean that your responses will not be included in data analysis or reporting for research purposes. If you decide to withdraw your participation during the interview, you must state to the researcher that you no longer wish to continue the interview, causing all answers to be voided. You may also omit responses to any questions you choose not to answer.

POTENTIAL RISKS and PROTECTIONS

There is a potential risk to the participant's status as a member of STEM undergraduate research group if individuals are identified by their responses to the interview questions (for example if they reveal negative views of peers' or supervisor's behavior). The research team has made extensive plans to minimize all risks to participants and protect confidentiality.

- You identity will be kept strictly confidential during the entire research process. Your confidentiality will be protected by not requiring your name in the survey or the interview.
- At the end of the *Interview Participant Survey*, you will have an option to indicate whether you are interested in reviewing the interview transcript before it is used for analysis. Upon review of the transcript, you may provide corrections or withdraw your consent to participate and the transcript, along with recording, will be deleted and not used for research.
- The interview will be recorded and stored on a secure server that requires multi-level authentication and accessible only to the members of the research team. The recording will be transcribed using Otter.ai application, transcripts corrected and verified for accuracy by a member of the research team. The transcripts will be de-identified. After the transcription and verification, the recordings will be deleted within 1 year of data collection. Recorded meetings will not be shared with anyone outside the research team.
- All data collected will be destroyed by 2030.
- Identifying information collected as part of the research will not be used or distributed for future research studies even if the identifiers are removed.

RESOURCES AND CONTACT INFORMATION

This research is being conducted by Dr. Anya Goodman in the Department of Chemistry and Biochemistry at Cal Poly - SLO. If you should experience any adverse outcomes from this research, please be aware that you may contact Dr. Anya Goodman at agoodman@calpoly.edu for assistance. If you have questions regarding this study or would like to be informed of the results when the study is completed, please contact the researcher using the email provided above.

If you have concerns regarding the manner in which the study is conducted, you may contact Dr. Michael Black, Chair of the Cal Poly Institutional Review Board, at (805) 756-2894, mblack@calpoly.edu, or Ms. Trish Brock, Director of Research Compliance, at (805) 756-1450, pbrock@calpoly.edu.

AGREEMENT TO PARTICIPATE

If you agree to voluntarily participate in this research project as described, please indicate your agreement and proceed to complete the survey in the Qualtrics platform. Please retain a copy of this form for your reference or visit project website to review this form. Thank you for your participation in this research.

Anya Goodman

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I have read the procedures described above. By checking "Agree" and entering my name in the signature box below, I am electronically signing this document indicating my consent to participate in this study and certifying that I am 18 years of age or older.

Response options:

- Agree: I agree to participate and allow my interview to be recorded.
- Agree: I agree to participate, allow my interview to be recorded, and would like to review the transcript of the recording.
- Disagree

[signature box for entering name]

If you agree to participate in the interview and short survey (12 questions, 5-10 minutes), please proceed to fill out the survey on the next page.

[Interview Participant Survey is in the document 2.2]

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