

Project Submission
for The 2016 Graduate School Showcase of Scholarship and Creative Activities
by Danielle Blot

Summary of Research

This study is a qualitative research study that investigates how women in the science, technology, engineering, and math (STEM) industry navigate a male-dominated workplace. The purpose of this research is to determine how women who are employed in the STEM industry are affected by an environment fueled by an extreme lack of gender diversity. The research, which will be completed by March 23rd, intends to reveal how women adapt their mindset and behaviors as a result.

The three research questions for the study are as follows:

1. How do women in STEM careers report coping with the overwhelming lack of gender diversity?
2. Do women report interacting differently with other women in STEM than they do with men in STEM? If yes, how so?
3. What perceptions do women in STEM report having about career advancement in their field?

The researcher is in the process of conducting interviews with 15 women of various specialties and career statuses currently working in a STEM position within the aerospace and defense industry. Their answers to a predetermined set of questions will be analyzed for themes and sentiments in order to draw out commonalities.

Relevance of the work

Women have been attempting to gain workplace equality for decades, despite making up an equal amount of the workforce. Women exceedingly struggle in traditionally masculine or male-dominated industries, particularly science, technology, engineering, and math (STEM). This study delves into the experiences women have in this industry once they enter the workforce with the goal of determining how women are affected by an environment fueled by an extreme lack of gender diversity. Specifically, the research focuses on coping mechanisms and behavior changes, interactions among peers, and perceptions of career advancement. The researcher's graduate program focuses on human resource development and this research will directly correlate to the program through discovering a basis for developing gender inclusive human resource practices for companies within the realm of STEM.

Researcher goals

As the researcher, I am very interested in the outcome of this study. Particularly, I am focusing in on how women perceive the ability for advancement and if that has any affect on how they see themselves and how they interact with those around them. I am a former employee of Northrop Grumman and my goal is to provide the findings back to the organization's employee resource groups and diversity and inclusion team as a proposal for developing new best practices. Specifically, my goal is that these findings will provide a data driven basis for developing and incorporating more gender inclusive work practices.

Researcher Information

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Danielle Blot is a second-year graduate student in the Adult Human Resource Development program at James Madison University. This research will complete the reading and research requirement of her program. As an undergraduate student at James Madison University, Danielle conducted a research study which included data collection and analysis through Qualtrics software. She has taken multiple research courses in her higher education experience including at the graduate level.

Faculty Advisor Information

Dr. Oris Griffin McCoy
Learning, Technology and Leadership Education
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Dr. Oris Griffin McCoy is a professor in the Learning, Technology and Leadership Education Department of the JMU College of Education. She has been on the James Madison University faculty for over 26 years. Her commitment to student learning is exemplified by her long-term involvement with community service-learning, having served as faculty liaison and a Professor in Residence (PIR) for several inner city schools in Richmond, VA for over six years; she also served as the Director of the PIR Program for three years. Dr. Oris Griffin McCoy teaches both undergraduate and graduate level courses. She received her Ed.D. in Higher Education: Administration from Western Michigan University. Her research interest includes student diversity, leadership, student access and retention.

She has also served on many research committees and is aware of the protocols and procedures of conducting research. Dr. Griffin McCoy is sensitive to the expectations of following IRB guidelines, particularly where human subjects are concerned.

Past and current research methods and other relevant courses that Dr. Oris Griffin McCoy has taught at JMU include:

- AHRD 540: Leadership and Facilitating
- AHRD 680: Reading and Research
- AHRD 690: Supervision of Graduate Teaching Assistance
- AHRD 698: Comprehensive Continuance
- AHRD 699: Thesis Continuance
- AHRD:700: Thesis
- LTLE 245: Leadership In Organizational Settings
- AHRD 570: Diversity and Ethics