

# Voices of Successful Women in ATE Programs: Counter Narratives



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## ABSTRACT

The findings presented here are based on interviews of seven community college technology women graduates from Advanced Technological Education (ATE) programs in seven community colleges in the U.S. These data demonstrate that women ATE graduates interpreted their experiences in ATE in ways that are connected to their opportunities to affirm their science identities, to receive support from professors and peers, as well as their personal attributes and histories. These findings have the potential to inform ATE in community colleges and ATE in general.

## PURPOSE

The scope of this research was focused only on the perspectives of graduates who have earned an associate’s degree as part of an ATE program in community colleges. While there is much literature on the deficits of women graduates of technology degrees, less attention has been given to the lived experiences of successful community college ATE women graduates. The goal of this research was to understand how successful women graduates from ATE programs in community colleges describe barriers and supports to their success. Lessons learned from this study can inform recruitment strategies and effective pedagogies for women and all students in community colleges.

## METHODOLOGY & PARTICIPANTS

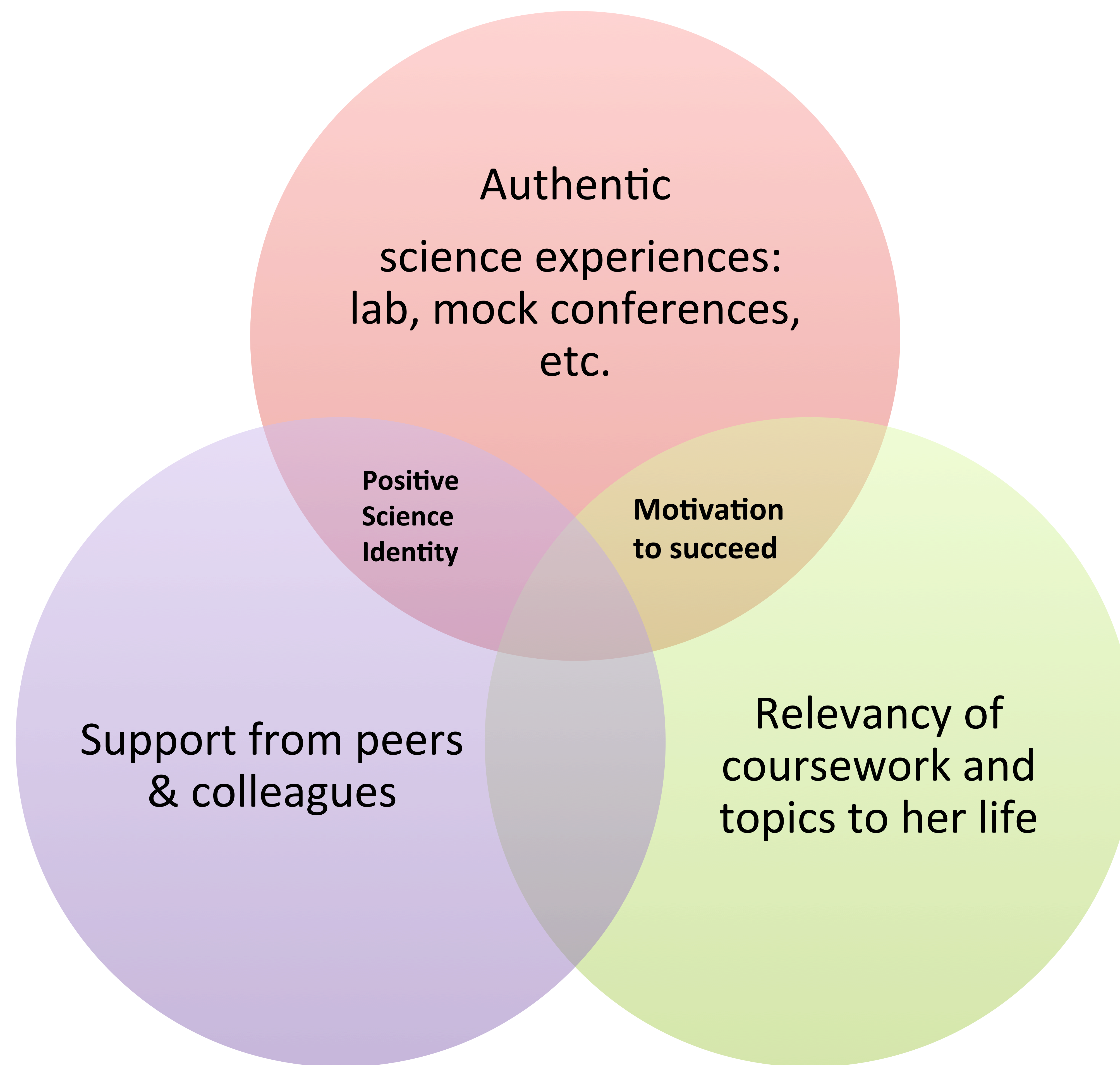
A semi-structured, phenomenological qualitative method was to used do a series of three consecutive interviews with each of the seven participants (graduates of ATE programs), focusing on her past experiences and interest in STEM, her experiences in the ATE community college program, and her meaning-making of her experience. The interviewees were diverse in age, race, ATE program focus, marriage status, and employment status. They were similar in that they were all women graduates from ATE programs. All interviews were transcribed verbatim and a domain and theme analysis was completed to understand how interviewees experienced the ATE programs.

## ACKNOWLEDGEMENT

This research is sponsored by the National Science Foundation Advanced Technological Education under grant DUE # 1003589. The ideas in this research are those of the researchers alone and do not necessarily reflect the policies or opinions of NSF ATE. The Principal Investigator for this study is Dr. Norena Norton Badway, Ph.D. (San Francisco State University).

## SUMMARY OF FINDINGS

### Conceptual Framework



## DISCUSSION

Overall findings revealed a tension between the positive and negative aspects of three components of the successful women community college STEM student’s experience (see conceptual framework). These results are particularly significant because it contributes to current research on understanding experiences of women ATE students at the community college level. This research highlights new approaches for understanding the community college experience and informs the development of innovative methods to support the success of women in STEM community college programs.

### 1.Support from ATE Professors

*“My advisor was so very hands-on and he did a really good job of advertising for jobs and he has a really good relationship with the General Manager at my current company” (Interview Excerpt)*

*“If I had a question they would stay after class and show me until I understood it.” (Interview Excerpt)*

### 2. Support from Peers

*“There was a group of five of us that actually, we would do more usually phone, conference calling, because we were obviously we’re all in different parts of our lives, there were times in our lives so we would do a conference thing and we would do, there were numerous times we would do that even prior to something more. We study together so yeah” (Interview Excerpt)*

*“We had a lot of class time because we had a studio so we spent four and a half hours every Friday together, in the mornings....And we definitely help each other study for test and things like that. So [this ATE field] is obviously different from other things because you’re in a lab setting so it’s an open environment. And I think that facilitates people coming together to work together more. So I think that helped in being able to just get up and walk around and be -- do that work.” (Interview Excerpt)*

### 3. Relevancy

*“You know, it never became a problem for me and mainly I attribute that to the fact that once I got into the, because there’s a lot of math and stuff in this industry so I do much better if I have something I can relate it to. If you just throw a calculus problem down at me or something, I might panic but if I can attributed it to figuring out voltage, figuring out that what it’s related to, it’s not really hard for me”*

*“I was mentored in the class, you had to do some lab and I went and did and went through this lab phase, I already at this lab class and it was so hands-on and it was, I don’t know I just felt like I was back, I knew I would get outside, I knew I would get to fix things, make things work and so I got excited about that part of it and I knew with being able to do that, the book work would just fall into place. It just clicked for me” (Interview Excerpt)*

### 4. Positive Increase in Science Identity

*“I feel like in order to become a scientist you had to be super smart...you had to be a protégé...in the science field, I was like, maybe I’m not smart enough to do it, and then once I got past it...” (Interview Excerpt)*

*“I’ve always been a science nerd... I’m excited about it so it’s just something that I’ve always been interested in. It’s just...I always I guess doubted my potential...I love science, and I love learning new things, and continuing to learn new things. I don’t want to stop school, I want to keep going, take classes here and there that I can.” (Interview Excerpt)*

### 5.Motivation to Succeed

*“It’s rough and it’s not easy being a girl in a men’s world per se but it’s worth trying it out and proving to yourself if nothing else that you can do it.” (Interview excerpt)*

*“College is just too hard but, I got to stop and tell myself like this is hard, I mean it gets - it could be hard if you choose to pick all those classes, but if you don’t choose to do that then you can take it slow as you want, you know.” (Interview excerpt)*

*“Everyday, we have to like motivate yourself to get up and do it. You also have you know, an internal motivation to do things, so you know, you have to sacrifice family time for studying or whatever. But I mean, when you have responsibilities, you have children, bills, and the things, you have to find new way to provide these things for yourself.” (Interview excerpt)*

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