

Public Abstract

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Title:Womens Experiences in Undergraduate Engineering Programs in Japan as Resources to the Decisions to Pursue Masters Degrees

The purpose of this qualitative study is to describe how women engineering students in Japan, where women have been underrepresented, experience their engineering study and how their decisions to pursue a master's degree are informed by their experiences.

I use identity (control) theory (Burke, 1991; Styrker, 1968, 1980) as a theoretical foundation for this study. Identity theory that has a structural symbolic interactionist tradition, posits that individuals' behaviors are explained by the relative importance of an identity and commitment to that identity, which is determined by the interactions and relationships with others. In other words, individuals' engagement in identity-related behaviors and interactions and relationships with others facilitate the development and maintenance a certain identity.

The research draws upon interviews with 32 final-year undergraduate women students in two different national engineering schools in Japan, including 19 women who decided to pursue master's degrees immediately after college.

Findings indicated that women had difficulties to engage in identity-related behaviors in social interactions with faculty and male peers. Sense of isolation, powerlessness, constraint, and inadequacy prevailed. Women students' awareness of their difference from the typical engineering students had negative consequences in terms of their identification with the department. Women perceived that their engineering study was constrained by poor teaching and little guidance from faculty at early stages of their programs of study. They also experienced challenges in participating because of token status in group settings. As a result, women tended to have low evaluations of themselves as future engineers. They perceived their male peers to have much higher self-identification as engineers. In deciding their postgraduate plans, participants often drew negative conclusion about working in engineering as well as master's degree program from their experiences. Despite these experiences, those who planned to pursue a master's degree tended to engage in engineering-related interactions and interpret their experiences more positively than those who decided not to pursue an advanced degree. Implications for future research and institutional and departmental practices are provided.