HOW TO ENHANCE THE ENROLLMENT AND RETENTION OF WOMEN IN STEM

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Abstract

Despite the fact of an increasing number of female students and graduates in Science, Technology, Engineering and Mathematics (STEM), there is low recruitment and retention of women in these sectors. In order to offer solutions for enhancing the enrollment and retention of women in these areas of education and profession, the authors collected and analyzed the life history narratives of a sample group (n=12) of international women, all STEM graduates, who work in the United Arab Emirates (UAE). Even if the group was small, four typologies were identified among participants' career decisions to abandon/persist in STEM: STEM career Non-starters; STEM Early career Abandoners; STEM Mid career Abandoners; STEM career Persisters. Potentially all participants had the capacity to be STEM professionals, as they had graduated in those disciplines, and more than half (58%) of these participants did continue into a STEM career. Subsequently, the majority (83%) then chose to abandon STEM, and only two (17%) of these STEM women graduates persisted with their careers in STEM professions. The theory of ‘Calling’ influencing the career choices of these women graduates was also investigated. There were four emergent themes of calling found from the content analysis of the life narrative data.

The themes were:
Theme 1 - Gift of intellect;
Theme 2 - Belief in a faith;
Theme 3 - Shared community (culture/family);
Theme 4 - Meaning of work.

The findings of this study suggest that the business of STEM does little to stimulate the notion of calling to STEM careers for women, resulting in non-adoption of a STEM career and early/mid STEM career abandonment. The authors suggest that to enhance the enrollment and the retention of women in STEM sectors, new educational methodologies in the classrooms should be complemented with information from career advisors on the meaning of work in STEM, i.e. socially impactful, collaboration with others, and focus on people and things. Also careers days, networking events, conferences should be organized and attended by students and their families, with the aim to spread knowledge about the life and accomplishments of STEM women graduates.

Keywords: Women, STEM, Calling, Abandon/Persist.