Facilitating Career Development of Women in Science, Technology, Engineering, Mathematics and Medicine: Towards Increasing Understanding, Participation, Progression and Retention through an Intersectionality Perspective

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Abstract : Background: The under-representation of women and consequent failure to fulfil their potential contribution to Science, Technology, Engineering, Maths, and Medicine (STEMM) subjects in the UK is an issue that the Higher Education sector is being encouraged to address. Focus: The aim of this research is to investigate the barriers, facilitators, and incentives that influence diverse groups of women who have embarked upon a related career in STEMM subjects. The project will address a number of interconnected research questions: 1. How do participants perceive the barriers, facilitators and incentives for women in terms of research, teaching and management/leadership at each stage of their development towards forging a career in STEMM? 2. How might gender intersect with ethnicity, pregnancy/maternity and academic grade in the career experiences of women in STEMM? 3. How do participants perceive the example of female role models in emulating them as a career model? 4. How do successful females in STEMM see themselves as role models and what strategies do they employ to promote their careers? 5. How does institutional culture manifest itself as a barrier or facilitator for women in STEMM subjects in the institution? Methodology and Theoretical framework: A mixed-methodology will be employed in a case study of one university. The study will draw on extant quantitative data for context and involve conducting a qualitative inquiry to discover the perceptions of staff and students around the key concepts under study (career progression, sense of belonging and tenure, role-models, personal satisfaction, perceived gender in/equality, institutional culture). The analysis will be informed by an intersectionality framework, feminist and gender theory, and organisational psychology and human resource management perspectives. Implications: Preliminary findings will be collected in 2017. Conclusions will be drawn and used to inform recruitment and retention, and the development and implementation of initiatives to enhance the experiences and outcomes of women working and studying in STEMM subjects in Higher Education.

Keywords : under-representation, women, STEMM subjects, intersectionality
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