Gender Disparities and Potentials in STEM Approach in Jordan and Saudi Arabia – An Analytical Literature Review

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Abstract

Recently, the integrated Science, Technology, Engineering, and Mathematics (STEM) approach has been adopted to develop scientific skills and critical thinking in the Middle East. Nevertheless, this approach faces some difficulties in application and gender disparities. In the Middle East, conservative restrictions and social norms affect women's lives and education, where the gender stereotypes and the power of the culture influence the shared beliefs about particular fields. Regarding gender, much research emphasizes female underrepresentation in virtually all STEM studies and careers. This study explores STEM education conceptualization in the literature in the selected countries (Jordan and Saudi Arabia). Furthermore, it provides an overview of STEM approach implementations and teachers' gender perspectives in the classrooms in Jordanian and Saudi schools. This paper investigates the implementations and gender disparities of STEM education using a qualitative document analysis' methodology to scrutinize, determine and select the relevant sources and documents. The results revealed a lack of understanding while applying STEM education in the classrooms and a need to urge more development programs that educate teachers about STEM practices and applications. Furthermore, the findings displayed a gap in gender in STEM education; Saudi Arabia and Jordan have constraints in many aspects, such as cultural norms, gender stereotypes that teachers portray in the classrooms, and the educational system's role in promoting gender disparities in schools.

Keywords: development program; education system, gender stereotypes; STEM education, teachers’ mindsets.