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SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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EARLY MEASURES TO ENHANCE FEMALE STUDENTS INTEREST IN STEM EDUCATION: AN INTERNATIONAL COMPARATIVE STUDY.

Abstract

In the field of Science, Technology, Engineering, and Mathematics, women are largely under-represented in many countries around the world (Committee on Science and Technology, 2009). In the United States, the number of women is lowest in engineering, computer sciences, and physics (National Science Foundation, 2017). Furthermore, women gained marginally more than only one-fourth of the doctorates in mathematics and statistics in this country (National Science Foundation, 2017). This gap in gender representation seems pervasive in other countries as well. In Ghana, girls' enrollment in physics, chemistry and also mathematics has historically been far lower than in biology (Anamuah-Mensah, 1995). This paper describes the development of a middle school girl STEM club in Ghana and the U.S. that has been integrated as part of the local school system. This initiative is guided by findings from Rodriguez Amaya and Boakye (2015, 2016) that suggests the need for interventions earlier than post-secondary education for girls in STEM education. The purpose of this study is to share how to transform research into action by sharing the model developed for the girls STEM clubs. Conclusion and areas for discussion will be centered on the imperativeness of out-of-school influential activities such as creating a girls' community of learners, STEM guest speakers and role models, and year-long STEM activities, in enhancing the interest of STEM education for female students in these two countries.

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