

# Contextual Enablers and Hindrances of Girl Child Participation in STEM Education in a Kenyan County: A Case Study

## Abstract.

In Kenya, student performance in sciences and Mathematics is still low compared to art-oriented disciplines. The poor performance has affected not only the Girl child's interest in these disciplines but also the number of girls that take STEM-oriented programs at tertiary levels. Several mitigating measures have been enacted although the situation has not changed much. This paper reports a study that explored contextual enablers and hindrances of Girl Child participation in STEM education in a Western Kenyan county. The study employed a case study approach by administering structured questionnaires, interview schedule and focused group discussion guide for data collection. The data were analyzed using both quantitative and qualitative methods and revealed that: 1) lesson development that connected science concepts to activities in the local context motivated and improved girl child's participation and performance in contextualized learning activities and 2), familiarity with the materials and tools used in planning and implementing contextualized learning activities evoked the girl child's enthusiasm and courage to exchange knowledge and ask more curiosity focused questions. Also revealed were hindrances including: 1) teachers' initial training that did not prepare them for this way of teaching and it was not and has not been modeled for them during their preservice education or the ongoing professional development workshops; and 2) the exam driven nature of the curriculum serving as a hindrance to teacher innovation and creativity in instructional techniques. The study recommends a more creative and innovative teacher training system and focused research to monitor girl child participation and performance in STEM education. Keywords: Contextualized learning; Girl Child, STEM education; performance

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