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Topic: Use of eLearning with AI to promote academic English proficiency through incidental language acquisition and prepare the girl child for STEM careers.

Subtitle: Use of eLearning with AI to prepare the girl child for STEM careers

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Digital platforms are recognized as essential tools for teaching and learning. When interfaced with AI, it transforms the way students learn and interact with subject content by enabling data driven decisions, real-time feedback and also customize the lessons to fit the requirements of each subject.

Governments globally have undertaken to provide equitable, quality education to all learners including the marginalized, hard-to reach and vulnerable groups. However, attainment of gender parity in marginalized regions and high poverty areas, both in rural and urban areas still remain a pediment especially in Sub-Saharan Africa. Within the region, Science, Technology, Engineering and Mathematics (STEM) subjects and related careers tend to be associated with masculinity, girls being underrepresented in STEM education and related careers. This stereotype can be reversed by ensuring early exposure of girls to the STEM subjects, focusing on the available role models and exposing them to hands-on activities during the teaching and learning process. School-technological company collaboration is also expected to play a major role in preparing these girls for STEM careers.

This research will therefore focus on application of e-learning with AI to prepare the girl child for STEM subjects and careers. It aims to explore the potential of AI-powered e-learning solutions in addressing gender disparities in STEM education, focusing on their accessibility, effectiveness and adaptability to the local content. It also aims to develop and test AI based solution design, implementation and evaluation of innovative AI based e-learning tools tailored to the unique needs of girls in Junior Secondary Schools (JSS) for enhancing STEM learning outcomes in the counties within the Eastern region of Kenya. And to investigate the impact of the implemented solutions on the performance and interest of girl students in STEM subjects and propose strategies for scaling up the successful approaches across similar regions in Kenya.