Context Matters
— RESEARCH GRANTS —

2022-2024 Context Matters Awarded Grants (Round 5)

Research title: Application of Digital technologies in the enhancement of Learning Experiences for Girls with Disabilities in Kilifi County, Kenya.

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Research location: Kilifi County, Kenya

Research dates: March 2023 – November 2024

Summary:

The use of digital technology in education is one of the most effective ways of reducing barriers to quality education for all children and particularly those with disabilities. lobally, the disparity in access to digital literacy persists, with a marked gender divide that often limits girls' technology access. Notably, Kenya's Competency-Based Curriculum places substantial emphasis on digital literacy. In light of this, our project is set to comprehensively explore the realm of assistive and digital technologies, focusing on their role in supporting the education of girls with disabilities in Kilifi County. Our overarching goal is to address critical questions:

i. Which assistive and digital technologies have girls with intellectual disabilities interacted with in their learning experiences?
ii. What is the digital knowledge level of girls in the use of assistive and digital technologies to enhance their learning experiences?
iii. What is the digital knowledge level of teachers on the use of assistive and digital technologies to enhance learning for girls with intellectual disabilities?
iv. To what extent does the use of digital technology enhance the acquisition of adaptive skills for girls with intellectual disabilities?
v. What challenges exist in implementing assistive and digital technologies in the teaching and learning processes for girls with intellectual disabilities?

To delve into these inquiries, our project will employ an experimental design featuring pre-test and post-test evaluations for both control and experimental groups. The research scope encompasses 1,247 girls with disabilities and 198 class teachers. Employing a combination of stratified random sampling and purposive sampling techniques, our study will encompass a sample size of 104 girls with disabilities and 26 class teachers.

To ensure the validity of our research instruments, the study will pilot the instrument in two selected schools within Kilifi County, which will not be part of the final study. Data will be collected using simplified interview schedules for girls with intellectual disabilities, questionnaires for class teachers, observation schedules, an Adaptive Skills Test (AST) and a Focus Group Discussion with sampled class teachers. A pre-test and post-test will be done to determine the change in the adaptive skills of the girls. After the pre-test, teachers will be trained in pedagogical skills and use of digital technology to enhance learning for the girls. Data will be analyzed using SPSS to generate frequency tables to represent emerging trends. T-tests will be run to test whether the adaptive skills of girls differ significantly between the pre-and post-test, and between the control and experimental groups. Qualitative data will be summarized into themes and analyzed to generate thematic patterns and to triangulate the quantitative data collected.

The project's outcomes will provide an implementation framework for education stakeholders in Kilifi County, aiding them in identifying and addressing the challenges related to digital literacy implementation. It will inform both county and national education policymakers on strategies to develop more effective digital literacy plans and enhanced learning experience tailored to girls with disabilities. Ultimately, the study results will pave the way for the provision of assistive and digital technologies and the employment of more digitally literate special education teachers in the county.

Dr. Sarah Wanjiku Mwangi is a Senior Lecturer in the School of Education, Pwani University Kilifi County, Kenya. With over two decades of teaching and professional experience in the field of Special Needs Education and Consultancy, Dr. Sarah Wanjiku Mwangi is a seasoned educator and researcher. Her areas of specialization encompass a wide spectrum, including Visual Impairments, Learning Disabilities, Intellectual Disabilities, Physical Disabilities, and Early Childhood Special Education. Dr. Mwangi has variously collaborated with Multidisciplinary Education Teams in the development and refinement of curricula for Special Education Students and Special Education Teacher Trainees in Kenya. Her expertise extends to Curriculum Development, Classroom Management, the creation of Individualized Education Programs (IEPs), and the initiation of Community-Based Special Needs Sensitization and Awareness Campaigns.