

# **Impact of Electronic Braille Note-Taking Devices on Academic Performance of Learners with Visual Impairment in Selected Special Primary Schools in Kenya**

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## **Abstract**

Academic performance of learners with visual impairment in Kenya has been dismal over the years. Researches on performance for the visually impaired learners have pointed at various factors among them teachers' attitudes, teaching environment, facilities, parents' attitudes, setting of exams and time among other factors. Little has been attributed to lack of technology and limited use of technology which is the question for this study. Technological advancements such as the Electronic Braille note-taking (EBN) devices have been developed and are available for use. This study therefore intended to examine the impact of EBN devices on academic performance of visually impaired learners in special primary schools in Kenya. The study was guided by the following objectives: to determine the adequacy of electronic Braille note-takers in Special Schools for the visually Impaired in Kenya, to determine the teachers' preparedness on the use of electronic Braille note-takers in Braille instruction, to find out the learners' attitudes towards the use of electronic Braille note-taking devices in learning and to deduce the impact of EBN devices on the performance of learners with visual impairment in primary schools in Kenya. This study was guided by the theory of technology acceptance model (TAM). TAM focuses on the interactions that occur between a person's perception of technology and therefore the person's technology usage behaviour. The study used a descriptive design while applying both quantitative and qualitative approaches. The study targeted a population of 15 Special schools with a population of 1982 learners, 238 teachers and 15 headteachers. Six special schools were purposively sampled: St. Francis Special School in West Pokot County, Marigat Special School in Baringo County, Kiomiti Special School in Kisii County, Korara Special School in Bomet County, Kibos Salvation Army School for Visually Impaired in Kisumu County and Thika Special Primary School in Kiambu County. The data collection tools were piloted at Likoni Special School for Visually Impaired. The findings of the pilot study were subjected to Cronbach Alpha reliability test and Validity Coefficient Index to ensure the validity and reliability of the tools. Data was analysed descriptively and thematically. The results were presented in form of tables and figures. The findings of the study showed that the EBN devices in the schools for visually Impaired learners were inadequate. The teachers in special schools for the Visually Impaired learners were not well prepared to incorporate EBNs in instruction. The LVIs in Kenyan special primary schools have a very positive attitude towards the use of EBNs in their learning activities. EBN devices had a positive impact on the academic performance of the learners. The findings are expected to inform the government and stakeholders of schools for the Visually Impaired to increase the supply and distribution of EBN devices to the schools for the visually impaired so as to improve the adequacy. The study also recommends the creation of time for regular trainings for both the learners and the teachers on the utilization of EBNs in teaching and learning.

**Key words:** special schools, visual impairment, braille

