

Title: Adequacy and effectiveness of assistive devices used to instruct learners with physical disabilities: a case of APDK Masaku school, Machakos, Kenya

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Abstract: Availability of devices to some learners with physical disabilities makes them function as active members both in school and society. Of interest in this study was adequacy and effectiveness of assistive devices used to instruct learners with physical disabilities at APDK Masaku School. The study was carried out at APDK Masaku School for the physically handicapped in Machakos district, Eastern province of Kenya to: find out different categories of physical disabilities at APDK Masaku, establish the types of assistive devices used in the school, investigate the views of teachers and learners on the adequacy and effectiveness of assistive devices and establish the challenges they faced respectively when using these devices. The study also adopted miller's learning theory for instruction which assumes the notion that learning is influenced by four basic factors. These are motivation, cue, response and reward. The study adopted descriptive research Design which helped uncover the nature of factors involved with each research question. The school had a total population of 175 learners, 21 teachers and the headteacher. Target population was 197. The study population was 40, comprising of 32 learners 7 teachers and the headteacher. Data was collected by use of questionnaires, interviews and observation checklists. In the choice of the correspondents, purposive sampling was employed for the selection of the headteacher, teachers and learners. The Pilot study was conducted at Joy Town Primary School for physically handicapped Thika, Central province of Kenya since it had similar characteristic as the school of study. The pilot study population was the headteacher, 4 teachers (in charge of academic and social welfare of the learners) and a total of 17 learners from the classes with the highest number of disabilities (8 learners from class 4 and 9 from class 7) were involved. Statistical package for social sciences (SPSS) and Microsoft Excel (Ms Excel) was used to analyse data. Both qualitative and quantitative ways of data analysis were used. Quantitative data from the questionnaires was entered to the computer using data entry programmes and descriptive analyses used to discuss the findings. Qualitative analysis involved description of body of materials studied, coding and tabulating each characteristic and describing the patterns the data reflected. Results revealed that there were learners with varied physical disabilities. It was however found out that only the assistive devices for mobility were adequate but they also lacked an aspect of quality. This is because these devices were big or small in size. Some like the wheelchairs and clutches missed some of their essential parts. This affected their effectiveness. There were challenges faced by teachers such as inability to interpret what learners said as well as being unable to effectively position and seat learners. Learners also faced challenges such as falling off from the devices, breakage of the devices and inability to move independently.