

# **Impact of integrating smartphones in the teaching and learning of Mathematics in Chegato Cluster, Mberengwa district, Zimbabwe**

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## **Abstract**

Worldwide, the utility of smartphones in the teaching and learning of Mathematics has been greatly recognized and taken advantage of. This is mainly because of the precisions this technology can bring in the classroom. This study investigated the impact of integrating smart phones in the teaching and learning of Mathematics at secondary schools in Chegato Cluster in Mberengwa district, Zimbabwe. It also examined strategies that can be used to enhance the use of smartphones in these schools. The study used a mixed method approach where both qualitative and quantitative data was gathered and was used to answer the formulated research questions. Ten parents, 10 Mathematics teachers, 4 school heads and 40 learners participated in the study. The study found that the introduction of the competence-based curriculum by the ministry of Education in Zimbabwe, which is in solidarity with Education 5.0 calls for the use of smart phones in the teaching and learning of Mathematics which ensures that several modern skills are being acquired by learners in Chegato secondary schools. Learners in Chegato Cluster benefit by using smartphones to store soft copies of various Mathematics textbooks which are often scarce in hard-copy form. Learners also benefit from Mathematical applications that are installed in their smartphones. Teachers use smartphones as media in the classroom to enhance learner-understanding of the concepts. Again, in Chegato, the use of smartphones has exposed learners to various Mathematical technological skills that help in the learning of Mathematics and has the potential of improving the pass rate. School heads and teachers acknowledged that the availability of smartphones in the schools has greatly assisted “O” level Mathematics learners to accomplish their tasks. Strategies that can be used to enhance the use of smartphones in secondary schools include the use of individualised student passwords which are controlled and monitored by the school administrators to ensure that the activities of each learner on the Internet can be tracked and any attempts by learners to visit undesirable sites are detected. Also, the use of software applications, such as Mikrotik Hotspot Blocker, can be used to block learners from accessing unsavoury Internet sites. The study concluded that though challenges such as lack of technological resources and some teachers’ negative attitudes towards the use of smart phones affect Chegato Cluster, most participants found it helpful to use smartphones in the classroom because the gadget expose learners to new and better ways of dealing with Mathematical concepts. The study finally calls for all the involved parties in the cluster and beyond to actively take up their responsibilities facilitating the use of smartphones for the benefits of the learners.

**Keywords:** Smartphones; Zimbabwe; Mathematics.