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Enhancing a South African Grade 5 mapwork lesson with a geographic information system (GIS)

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Abstract

South African educational policies have been put in place to ensure that Information and Communication Technology (ICT) integration is adopted and successfully implemented in the educational domain. For instance, the national curriculum, the Curriculum and Assessment Policy Statement (CAPS), makes recommendations regarding software tools, such as a geographic information system (GIS), that teachers should use in their teaching and learning. However, there is very little practical guidance on how these tools can be used in the classroom.

This research focuses on demonstrating how a GIS can be used to enhance the learning process of a Geography lesson with a focal point on vegetation regions in South Africa. Diana Laurillard's conversational framework and Karl Maton's semantic wave are the theories that were used in this study to make explicit what could happen in the classroom if GIS is integrated into the teaching and learning process. The findings were used to develop a prototype of the lesson that can guide teachers on using a GIS to teach this concept. The GIS proved to be a valuable tool in the classroom in which learners can interact in the learning process and apply concepts in the real world.