



Indigenous games as the sustainable context-based pathways in the teaching and learning of mathematics for the Afromontane learners

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The purpose of the study is to design a sustainable framework of teaching and learning Mathematics to Afromontane Grade 10 learners by using indigenous games. According to various reports, such as the Annual National Assessment (ANA) Report of 2011, the Department of Basic Education (DBE) Report of 2009, 2010; the Southern and East Africa Consortium for Monitoring Educational Quality (SACMEQIII) Report of 2010, and the World Economic Forum Mathematics Report of 2011, learners' performance in mathematics has been poor. Learners find it difficult to comprehend mathematical concepts in schools as they are taught in a very abstract way, with outdated modes of rote learning. Teachers tend to ignore the home background and context of the Afromontane learners, thus denying them full access to mathematical content. This project is conducted to address specific challenges and develop a strategy through the use of Indigenous games (to mention a few diketo (coordination game), kgati (skipping rope), and morabaraba (board game) to enhance the performance of the Afromontane learners in mathematics.

The project will help to identify serious challenges in the teaching and learning of mathematics classes. The method of using indigenous games to teach mathematical concepts will greatly inhibit learners' memorising of mathematical content and formulae without understanding. The Afromontane parents who possess rich capital in the teaching of mathematics are always alienated, but the use of indigenous games to teach mathematics will surely accommodate them. The cultural capital possessed by learners and parents will assist in concretising the mathematical content, which initially looked abstract. As a result, it is envisaged that learners' performances in mathematics will show significant improvement. The cultural capital of the Afromontane parents will help learners to extract mathematical content easily infused in indigenous games and encourage subaltern parents to realise that they could play a significant role in the teaching of mathematics.

The project will focus on breaking such barriers and establish the integration between mathematics and Indigenous games. Mathematics should be viewed as human activity practiced by all cultures, developed and contested over time through both language and symbol by social interaction and thus open to change. The project will utilise the Participatory Action Research (PAR) recognises the Afromontane community members as experts and it is empowering for communities who are enabled to find their own solutions to local issues. The marginalised capitals of the Afromontane people can be explored to understand Mathematical concepts by using cultural games, like indigenous games.

For more information: Refer to Dr Moloi's profile listed under Researchers/Project leaders