

Developing an Indigenous Mathematics, Science and Technology Education Master's Program: A Three Universities Collaboration

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Abstract : The participatory action research study reported in this paper aims to explore indigenous mathematics, science, and technology to develop an indigenous Mathematics, Science and Technology Education Master's Programme ultimately. The study is based on an ongoing collaborative project between the Mathematics, Science and Technology Education Departments of the University of South Africa, University of Botswana and Chinhoyi University of Technology. The study targets the Mathematics, Science and Technology Education Master's students and indigenous knowledge holders in these three contexts as research participants. They will be interviewed; documents of existing Mathematics, Science and Technology Education Master's Programmes will be analysed; mathematics, science and technology-related artefacts will also be collected and analysed. Mathematics, Science, and Technology Education are traditionally referred to as gateway subjects because the world economy revolves around them. Scores of scholars call for the indigenisation of research and methodologies so that research can suit and advance indigenous knowledge and sustainable development. There are ethnomathematics, ethnoscience and ethnotechnology which exist in indigenous contexts such as blacksmithing, woodcarving, textile-weaving and dyeing, but the current curricula and research in institutions of learning reflect the Western notions of these subjects. Indigenisation of the academic programme contributes toward the decolonisation of education. Hence, the development of an indigenous Mathematics, Science and Technology Education Master's Programme, which will be jointly offered by the three universities mentioned above, will contribute to the transformation of higher education in this sense.

Keywords : indigenous, mathematics, science, technology, master's program, universities, collaboration

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