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TEACHERS' PERCEPTIONS OF ADDRESSING THE AFFECTIVE DOMAIN IN SCIENCE EDUCATION THROUGH ENGAGING PEDAGOGIES

Abstract:

Worldwide there is a call for transformation in the education system to equip learners for the 21st century. Despite this plea the South African science curriculum has an examination driven approach where teachers are bound by rigid schedules (the so-called "pacesetters") to cover the content in a specific time. The competence of teachers is often judged by the education department on the pass rate of their learners. Most teachers therefore follow a predominantly teacher-centred approach focusing only on the cognitive domain at the expense of the affective domain (such as learner interest in the natural sciences). The aim of this research was to explore whether using engaging pedagogies in science teaching can address the affective domain. In this qualitative study, within an interpretivist paradigm, in-service high school science teachers attended a two-day short learning programme to equip them with strategies which are suitable for cultivating skills needed to face the challenges of the 21st century. Teachers were exposed to STEAM (Science, Technology, Engineering, Art and Mathematics) teaching by including puppetry and cooperative learning as engaging pedagogies to enhance self-directed learning. The participating teachers were exposed to a collage depicting a degraded wetland close to the community (township) where they teach. The community live in predominantly low socio-economic conditions. Teachers were asked to problematize the environmental issue in the collage after which they used the De Bono's thinking hat method to explore possible solutions. In the next part of the activity they wrote a puppet script about the solutions and presented a puppet show. Data were collected from a pre- and post-test questionnaire to gauge the perceptions of the participating teachers with regards to the engaging pedagogies, reflective discussions of using engaging pedagogies and the observations of the researchers. The results showed that the participating teachers realized that engaging pedagogies can be an effective tool to teach for the affective domain, are prepared to implement it, but have especially concerns of using puppetry in the high school. Third generation Cultural Historical Activity Theory as theoretical framework was used as a diagnostic tool to analyze the data and to identify tensions in the activity (the short learning program) system.

Keywords:

Engaging pedagogies, puppetry, the affective domain, Cultural Historical Activity Theory

JEL Classification: I23, I29