

Education for Sustainable Development Pedagogies: Examining the Influences of Context on South African Natural Sciences and Technology Teaching and Learning

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Abstract : Post-Apartheid South African education system had witnessed waves of curriculum reforms. Accordingly, there have been evidences of responsiveness towards local and global challenges of sustainable development over the past decade. In other words, the curriculum shows sensitivity towards issues of Sustainable Development (SD). Moreover, the paradigm of Sustainable Development Goals (SDGs) was introduced by the UNESCO in year 2015. The SDGs paradigm is essentially a vision towards actualizing sustainability in all aspects of the global society. Education for Sustainable Development (ESD) in retrospect entails teaching and learning to actualize the intended UNESCO 2030 SDGs. This paper explores how teaching and learning of ESD can be improved, by drawing from local context of the South African schooling system. Preservice natural sciences and technology teachers in their 2nd to 4th years of study at a university's college of education in South Africa were contacted as participants of the study. Using qualitative case study research design, the study drew from the views and experiences of five (5) purposively selected participants from a broader study, aiming to closely understating how ESD is implemented pedagogically in teaching and learning. The inquiry employed questionnaires and a focus group discussion as qualitative data generation tools. A qualitative data analysis of generated data was carried out using content and thematic analysis, underpinned by interpretive paradigm. The result of analyzed data, suggests that ESD pedagogy at the location where this research was conducted is largely influenced by contextual factors. Furthermore, the result of the study shows that there is a critical need to employ/adopt local experiences or occurrences while teaching sustainable development. Certain pedagogical approaches such as the use of videos relative to local context should also be considered in order to achieve a more realistic application. The paper recommends that educational institutions through teaching and learning should implement ESD by drawing on local contexts and problems, thereby foregrounding constructivism, appreciating and fostering students' prior knowledge and lived experiences.

Keywords : context, education for sustainable development, natural sciences and technology preservice teachers, qualitative research, sustainable development goals

Conference Title : ICETT 2018 : International Conference on Education, Teaching and Technology

Conference Location : Toronto, Canada

Conference Dates : June 21-22, 2018