AN ILLUMINATIVE EVALUATION OF THE INFLUENCE OF TESSA SCIENCE OER USE ON PRE-SERVICE SCIENCE TEACHERS' PEDAGOGY

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ABSTRACT

The study was conducted to investigate how the use of the Teacher Education in Sub-Saharan African (TESSA) Open Educational Resources (OER) units improved pre-service Science teachers' pedagogy. The illuminative case study design was employed to collect data using semi-structured interview guide and document analysis. Purposive sampling technique was used to collect data from 18 pre-service teachers who used the TESSA Science OER units in teaching during their off-campus teaching practice. Data generated were analysed thematically. The findings were that pre-service teachers used the TESSA Science OER in teaching during the yearlong off-campus teaching practice because they were motivated by their Science tutors to use the innovation during the on-campus teaching. It also emerged in the study among others, that the use of the OER units enhanced pre-service teachers' understanding and practical use of child-centred pedagogy and pedagogy of mutuality. The use of the TESSA Science units also improved participants' confidence in teaching Science and exposed them to the use of varied and novel teaching techniques. Despite the above success stories, the high cost of ICT tools and poor or non-existing internet connectivity prevented the effective use of the innovation. The study recommended, among others, that management of OLA College of Education should look for funding to support students to acquire affordable ICT tools if the continuous institutionalisation of the TESSA OER remains its goal.

Keywords: TESSA science OER, science pedagogy, child-centred pedagogy, teacher quality, teacher education, pre-service teachers.