

Change of Science Teachers' Use of Information and Communication Technology (ICT) Media Resources and its Pedagogical Use in Science Classrooms in a Developing Country

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ABSTRACT Using quantitative and qualitative research, the present study explores and compares the variety of information and communication technology (ICT) resources in use by high school Science teachers, and how their pedagogical and technological use of ICT in Science classrooms have changed over the years. The initial quantitative study confirmed that only a few Science teachers used ICT multimedia, but more now use PowerPoint and internet searches for procuring data as well as more regularly for teaching. The initial qualitative study suggested that Science teachers are keen to use ICT, but some lack specialized ICT technological skills and pedagogical content knowledge skills, and this was not found to have changed in the final qualitative study. The study also suggested that teachers are keen to encourage learners to engage in constructivist learning, but are constrained by the ICT infrastructure prevalent in their schools. Where software media, internet and computers are accessible, they are not pedagogically and technologically easily integrated in classroom teaching due to limited time and accessibility of computer rooms. The present study has implications for the successful integration of ICT in Science classrooms for both Science teachers and ICT management at schools.