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Teachers' Technological Pedagogical and Content Knowledge and Technology Integration in Teaching and Learning in a Small Island Developing State: A Concept Paper

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Abstract: The success of technology integration initiatives hinges on the knowledge and skills of teachers to effectively integrate technology in classroom teaching. Consequently, gaining an understanding of teachers' technology knowledge and its integration can provide useful insights on strategies that can be adopted to enhance teaching and learning, especially in developing country contexts where research is scant. This paper extends existing knowledge on teachers' use of technology by developing a conceptual framework that recognises how three key types of knowledge; content, pedagogy, technology, and their integration are at the crux of teachers' technology use while at the same time is amenable to empirical studies. Although the aforementioned knowledge is important for effective use of technology that can result in enhanced student engagement, literature on how this knowledge leads to effective technology use and enhanced student engagement is limited. Thus, this theoretical paper proposes a framework to explore teachers' knowledge through the lens of the Technological Pedagogical and Content Knowledge (TPACK); the integration of technology in classroom teaching through the Substitution Augmentation Modification and Redefinition (SAMR) model and how this affects students' learning through the Bloom's Digital Taxonomy (BDT) lens. Studies using this framework could inform the design of professional development to support teachers to develop skills for effective use of available technology that can enhance student learning engagement.

Keywords: information and communication technology, ICT, in-service training, small island developing states, SIDS, student engagement, technology integration, technology professional development training, technological pedagogical and content knowledge, TPACK

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