

ABSTRACT

There is a scarcity of research on the understanding of teachers' beliefs and experiences around ICT integration and particularly on the views of teachers who are teaching in South African paperless high school classrooms. This study reports the findings of an exploration of beliefs and self-reported experiences of 22 high school teachers implementing the ICT integration pilot project in five high schools in the Gauteng province of South Africa. The aim of the study was to investigate and gain a deeper understanding of the beliefs that teachers hold about and their experiences of integrating ICT in classroom teaching.

The unified theory of acceptance and use of technology (UTAUT) model propounded by Venkatesh, Morris, Davis, and Davis (2003) was adopted as the theoretical basis of the study. The UTAUT model is comprehensive and identifies key constructs in acceptance and use of ICT as determined by the intention to use the technology and the actual usage. According to the UTAUT, performance expectancy, effort expectancy and social influence are indirect determinants of a user's intention to use technology while facilitating conditions are the direct determinants of actual use. UTAUT determines whether a user will accept using the new technologies and the user's ability to use it in an effective way.

The study employed a qualitative exploratory case study design to gain understanding of the phenomenon investigated. Data were generated through semi-structured individual face-to-face interviews and focus group interviews. Additional data were obtained through the researchers' personal journal where I captured some relevant information pertaining to the study from informal conversations with teachers and observations of different scenarios and resources in the five paperless schools. A comprehensive thematic analysis based on Braun and Clark's (2006) steps to thematic analysis was conducted. Five distinct but interrelated themes emerged from the data.

The findings revealed that teachers in paperless schools have divergent understandings of ICT integration in classrooms. Teachers believe ICT is beneficial to teaching because it is flexible, enhances teaching and learning, saves time and promotes effective interaction between and among teachers and learners in the classroom. The study also

found that ICT integration trainings were shallow in some schools, non-progressive, irregular and sometimes facilitated by incompetent trainers. The majority of teachers believe that learners' attitudes to possessing tablets constitute a major challenge to ICT integration; hence, teachers perceived ICT as distractive tools that make classroom management difficult. Other challenges are poor training, unreliable Internet connectivity, irregular electric power supply and inadequate infrastructural facilities. The study found that teachers' age and years of teaching experience, teachers' attitudes, the school timetable, support, and material resources are prominent factors that influence ICT integration in paperless schools.

Some contributions of the study include the provision of empirical data that can guide policy formulation, support, monitoring and evaluation in future ICT integration initiatives. I also designed a technology integration model (TIM) drawing from the original theory of the UTAUT model that foregrounds beliefs as the most significant determinants of ICT integration in schools because adoption and actual integration of technologies in the classroom are influenced by a person's beliefs. Furthermore, the study proposed a sustainable school ICT integration framework for future introduction and implementation of ICT integration projects in South Africa.

The study recommends that policy formulation and decisions to initiate innovation projects in schools should be guided by contextual needs through the outcomes of feasibility studies about the context and major players in the education system.

The findings of the study led to a conclusion that ICT integration in the classroom is not only influenced by explicit factors such as resources, training and context as commonly reported in the literature but also by implicit factors like teachers' understandings or knowledge of ICT integration and teachers' beliefs about and experiences of integrating ICT in classrooms.

Keywords: Affordances, Beliefs, Experiences, Gauteng, ICT integration, Paperless high schools, Teachers, UTAUT.