## Abstract

This study explored the primary teachers' beliefs, attitudes and behavioural intentions (BAB) to use information and communication technology (ICT) and how teachers' beliefs were enacted in the actual teaching of the concept of time. This was a qualitative case study on four primary school teachers from an international independent school in Johannesburg, South Africa when they were teaching the topic of time. The study was guided by the unified theory of acceptance and use of technology (UTAUT) model. Data were analysed thematically but some descriptive statistics were used to support the qualitative analysis. The major findings of the study indicated some positive teacher perceptions in the facile use of ICT and the pedagogical potential of ICT to improve teaching and learning mathematics. All participants felt the urge and showed motivation to integrate ICT in mathematics teaching and learning. However, the study showed that in general, they lack onsite technical support, encouragement from the school leadership, unreliable ICT infrastructure, and the lack of training and professional development in the pedagogical use of ICT. The study recommends that the school leadership should encourage teachers and be very explicit about the benefits of integrating ICT into mathematics teaching. It should provide onsite technical support, adequate ICT infrastructure as well as continued training and professional development to boost teachers' competencies in the pedagogical use of ICT in mathematics teaching and learning.