The Role of E-Learning in Science, Technology, Engineering, and Math Education

Authors : Annette McArthur

Abstract : The traditional model of teaching and learning, where ICT sits as a separate entity is not a model for a 21st century school. It is imperative that teaching and learning embraces technological advancements. The challenge in schools lies in shifting the mindset of teachers so they see ICT as integral to their teaching, learning and curriculum rather than a separate E-Learning curriculum stream. This research project investigates how the effective, planned, intentional integration of ICT into a STEM curriculum, can enable the shift in the teacher mindset. The project incorporated: • Developing a professional coaching relationship with key STEM teachers. • Facilitating staff professional development involving student centered project based learning pedagogy in the context of a STEM curriculum. • Facilitating staff professional development involving digital literacy. • Establishing a professional community where collaboration; sharing and reflection were part of the culture of the STEM community. • Facilitating classroom support for the effective delivery innovative STEM curriculum. • Developing STEM learning spaces where technologies were used to empower and engage learners to participate in student-centered, project-based learning.

Keywords : e-learning, ICT, project based learning, STEM
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