

# Can Technology Revolutionise Pedagogy in the Early Years?

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Every day young children are born into an ever-expanding digital world (Palaiologou, 2016). However, debates around the role, purpose and value of technology in the lives of the human continues and these have begun to permeate educational contexts, the key concern being around how they can improve children's learning experiences (ibid). Despite the revolutionary claims of touch screen technology (Kaye, 2017, Ferenstein, 2011) and the government's emphasis on the importance of settings to produce digitally literate graduates (Pegrum, 2011), the use of technology in classroom contexts

continues to be contentious. Goodwin et al (2012) and Kucirkova (2013) suggest that sparse use of digital artefacts, such as tablets in education contexts, is due to the lack of conclusive, evidence-based research.

There is evidence that suggests that technology has become more prominent in classrooms. Selwyn (2016) explains that it became a natural addition to how society 'does' education symbolised in the UK in the early 2000's with implementations such as interactive whiteboards (IWB) (Hockly, 2013). Introduced with a purpose to increase engagement and motivation for learners; IWB offered a multi-modal approach to teaching and learning which was intended to encourage group work and cater for different learning styles (Barber, Cooper and Meeson, 2007). Prior to the introduction of IWB, technology had become increasingly more sophisticated and since 2010, one of the most popular and owned technological devices in the UK has been the tablet (Kucirkova, 2014). Research by a funded project 'Tech and Play' in 2015 found that pre-schoolers (aged 0-5 years) are spending on average one hour and 19 minutes on a typical weekday and one hour 23 minutes of tablet usage over the weekend (Marsh et al, 2015). This suggests that tablets are common place in children's home lives, which contributes to concerns about their uses for educational purposes in classrooms. Perceptions of the educational advantages of tablets are mixed, with parents' concerns in relation to the impact on health and general well-being (Marsh et al, 2015) and school concern about how tablets can improve outcomes for children's learning (Palaiologou, 2016).

Currently in UK schools technology is an important aspect of the education system. Information and communications technology (ICT) is a compulsory subject in the National Curriculum. Starting from birth, the Early Years Foundation Stage (EYFS) aims to teach babies and toddlers the simplistic uses of technology (DfE, 2014). The EYFS also states that as they enter reception, children should be able to 'talk about ICT apparatus, what it does, what they can do with it and how to use it safely' (ibid, pg. 41). Disengagement from the EYFS may have negative effects on children's learning and development as providing children with 'virtual tools have the potential to shift the way children think and learn' (Simpson and Toyn, 2012).

The government's priority is around children's literacy development (DfE, 2014), particularly in the early years (e.g. two-year-old offer). In the EYFS curriculum, reading is key to development, stating that children: 'should read phonically regular words of more than one syllable as well as many irregular high frequency words' and 'Describe the main events in the simple stories they have read' (DfE, 2014; pg 11). The emphasis in practice is around new ways to

increase children's outcomes in literacy. Merchant (2015) states that recently educators have been encouraged to consider how literacy practices and possibilities are changing. At a time where literacy has faced an excess of policy interventions aimed to raise standards, literacy teaching is evolving through the use of new technological tools which are part of contemporary society, Dunn *et al*, (2014) in an attempt to ensure a digitally literate child and adult is formed.

Linking back to Simpson and Toyn's (2012) thoughts on technologies having the potential to change thinking and learning, findings by Kucirkova (2014, pg.1) indicate that '77% of children prefer to access the books in digital format'. Kucirkova (2014) states that tablets have three main features which have the potential to have a positive influence upon early education; portable and light-weight, allow a range of apps and eliminate the need for separate hardware such as keyboards. The flexibility and diversity of tablets is immensely attractive to early years' practitioners who are seeking ways of rejuvenating teaching practices (Billington, 2016).

Kucirkova (2014) suggests a negative relationship between digital and non-digital resources has arisen, creating negative myths surrounding technology in the early years. E-books are an electronic version of a physically printed book characterised by three main modes: sound, text and image (Kucirkova, 2013). As opposed to traditional physical books, e-books can offer children multiple possibilities for interaction guided by practitioners such as shaking the device or blowing into the microphone when interacting with story book apps (Merchant, 2015). E-books also provide an increased diversity of books which could rejuvenate children's interest in reading (Kucirkova, 2016). Despite these advantages, Plowman (2009) is critical of apps in the early years, arguing that the majority of three and four year olds are just beginning to learn numbers and letters and are therefore, not ready for the complexity of tasks set on the apps.

In spite of diverse views on the role of tablets, there appear to be possibilities and potential for tablets to be further used as a successful link between home and school learning. Marsh *et al* (2005) suggest that digital technology can promote family interaction therefore practitioners may find it successful to plan homework using a variety of educational apps that parents and children can spend time completing together at home. The informality of this may not be recognised as homework or a taught class which have negative stigmas (Rowe, 1991). However, it must be recognised that not all children have a tablet at home (Merchant, 2015). This increases the importance that children

are given the opportunities to develop the relevant skills and knowledge through such technologies provided by our education system (Rowe, 1991).

Recognising the promise of technology and pushing for increased use within classrooms in the UK brings with it heightened emphasis on the importance of children's e-safety and whether responsibility lies with parents or schools? E-safety sessions protecting children from risks that the internet may impose is vital (Elgot, 2017). The Children's Commissioner (2017) also addressed these issues within a recent report 'Growing Up Digital'. They suggest a creation of a broad 'Digital Citizenship programme' to be taught in primary schools (ages 4-14 years) in order to help prepare children for experiences online.

Concluding, the growing potential of revolutionising education in forms of technology and providing an education which nurtures essential digital skills cannot be ignored and omitted from children's early experiences. 'If new technologies continue to remain absent from the school curriculum, then we risk failing to turn on a powerful switch that can light up this generations learning' (Flewitt et al, 2014, pg.17).

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