

CRAYONS AND iPADS

LEARNING AND TEACHING OF YOUNG
CHILDREN IN THE DIGITAL WORLD

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THE DIGITAL WORLD OF YOUNG CHILDREN

Debra Harwood

PERVASIVENESS OF TECHNOLOGY



Digital technologies are prevalent within western society, with ‘smart’ mobile use among young children escalating (e.g., tablets, iPads, smartphones). The anywhere/anytime access to the Internet, the convenient size and portability and relative inexpensiveness of smart mobile technologies make these devices extremely attractive within educational contexts. A recent report by Ofcom (2013) in the United Kingdom reported ‘use of a tablet computer at home had tripled among 5–15s since 2012 (42% versus 14%) while one-quarter (28%) of 3–4s use a tablet computer at home’ (p. 5). In addition, tablet computers are widely used in many educational classrooms, with rates reported as high as 70% among primary and secondary schools in the United Kingdom (Coughlan, 2014) and more than half of American early childhood educators having access to tablets in the classroom (a twofold increase since 2012) (Blackwell, Wartella, Lauricella & Robb, 2015). In Canada, a similar pattern has emerged with universal access to the Internet through portable devices by children 9–16 years of age (MediaSmarts, 2014). Seemingly, young children’s play activities are impacted by this greater use of and access to mobile devices (e.g., streaming videos to tablets) (Edwards, 2013a; Moses, 2012). Attendant with this prevalence are the ‘cautionary’ tales of the potential negative impact of technology on young children. When writing this introduction, a quick Internet search revealed several featured articles that included concerns related to the unsafe nature of iPads (throughout the book, we will use the terms iPads and tablet interchangeably) and an emphasis on the detrimental effects of tablets on child development.



Yet, as Wohlwend (2010) explains, digital worlds are pervasive in young children's lives, and many 0–6-year-olds use media on a given day to read a book or listen to music. And toddlers and preschool-aged children do not appear to be passive media users; rather they actively engage in playing sophisticated games on cellphones, creating avatars, requesting and loading specific websites on the Internet (Rideout, Vandewater & Wartella, 2003). Thus far, the most widely cited research regarding the use of such devices in the home environment reveals a balanced approach (Plowman, McPake & Stephen, 2008, 2010; Stephen, Stevenson & Adey, 2013). Thus, despite the cautions, digital mediums are a part of the sociocultural context of young children's lives. Perhaps, as adults, we have yet to fully understand young children as 'emergent users of new literacies and new technologies' (Wohlwend, p. 144); thus, our somewhat technophobic notions persist.

In this book, I propose that understanding the young child's digital world is an important referent for educators (and adults in general). As such, I invited authors to contribute notions that would challenge traditional views of play and early childhood education (ECE; we have defined the term 'early childhood education' to refer to both school-based and community-located educational and care programs for children aged 3–8 years). Collectively, my fellow authors and I posit that technology – iPads specifically – provides an accessible and additional learning and instructional medium that can be used to *provoke*, *ignite* and *excite* children's interest in and exploration of the world around them. Ultimately, it is through this exploration and engagement that new discoveries are made and learning unfolds. As young children inquire about the world around them and their place in it, new and interesting ways to play and learn can emerge with iPads. For many of us contributing to this book, we were drawn to iPads and the worlds of children. The iPad, a relatively new digital medium within the ECE classrooms we were affiliated with, offered an exciting window to explore children's experiences and lived realities while also engaging all of us in questioning some of the taken-for-granted notions about early learning.

Many of our discussions throughout the book are allied with references to the various research studies we have engaged in as scholars. The book's title, *Crayons and iPads*, was inspired by one such study. Several of the contributing authors participated in this particular study and we jointly spent 10 months observing and documenting children's thinking and interactions before and after the research team introduced iPads within five different ECE classrooms. A full description of this study is available elsewhere (Harwood, 2014; Harwood et al., 2015). Here, we simply use vignettes from this study (and others) as

provocations, common threads throughout the book and a starting point upon which to question notions of play, iPad-infused learning and teaching pursuits, and theoretical concepts within ECE.

NOTIONS OF PLAY IN THE 21ST CENTURY

What is play? Play is an elusive concept to define (Sutton-Smith, 1997). In the most general sense, play can be thought of as the antithesis of work. And although play might be easily recognizable, an irrefutable definition does not exist (Johnson, Christie & Yawkey, 1999). Mayfield (2001) provides one of the most comprehensive lists of the characteristics of play compiled from the work of researchers of the 20th century. She concludes that play is characterized by: the voluntary nature (child choice) of the activity, its meaningfulness, active engagement, intrinsic motivation, pleasure and enjoyment, non-literality, child-directedness, naturalness, flexibility, spontaneity, freedom from adult rules, and enjoyment (p. 257). With the onset of the digital world and the pervasiveness of digital mediums in young children's lives, everything would now seem to have an online presence (Lim & Clark, 2010); thus, the nature of play appears to have somewhat shifted. Whether or not this 20th-century definition of play still holds true is unclear. However, if play is construed as a powerful social practice shaping children's immediate worlds (Wohlwend, 2014), the definition of play can be capacious and more encompassing of actual play worlds and behaviours of the 21st-century child.

Karen Wohlwend (2011) describes play as a tactic – a behaviour that 'manipulates the constraints in here-and-now reality to make alternative realities possible [enabling] children to create diversions and escapes while remaining in the same physical space' (p. 116). As children play, they participate and enter imagined spaces, 'communities to which they belong and hope to belong' (Kendrick, 2005, p. 9). In this manner, play is a conduit for identity-making (Holland, Lachicotte, Skinner & Cain, 1998) as well as a literary and social text (Kendrick). Kendrick's use of Schwartzman's (1976) metaphor of a 'sideways glance' of one child's dramatic play experience helps illustrate the diverse range of 'social, cultural, and textual' platforms that children draw from within their play frames (p. 6).

In the 21st century, these communities of play do include virtual and technological devices – a rhizomatic meaning-making space that involves both material/immaterial relationships (Burnett, Merchant, Pahl & Rowsell, 2014). Several of the chapters in the book also describe this convergence of 21st-century play (Edwards, 2013b). Likewise, I have previously discussed this melding of children's concrete

play with digital play enabling young learners 'to enact new understandings, and engage in innovative meaning-making processes' (Harwood, 2014, p. 4). Importantly, the incorporation of children's perspectives and experiences within the definition of play is vital. Clearly, children view and enact the *appropriation, accommodation, assimilation* and/or *adaptation* (Marsh & Bishop, 2014) of digital worlds as important modes for their online/offline play contexts (Marsh, 2011). And given the haptic and moveable nature of the iPad, the seamlessness of online/offline play, digital play is embodied play.

iPad-INFUSED INQUIRY PURSUITS

As a starting point, this book has adopted a converged (Edwards, 2013b) or hybrid view of play (Marsh, 2010) where children seamlessly blur their digital and non-digital activities (Plowman et al., 2010; Plowman, Stevenson, Stephen & McPake, 2012). By doing so, we draw attention to the potential of iPads in offering new avenues for exploring, experimenting and meaning-making (Yelland, 2011). Thus, the repertoire of experiences available within the 21st-century ECE classroom ought to include digital modes. Purposefully, as educators and scholars, we position our discussion alongside inquiry-based learning/pedagogies. As opposed to traditional pedagogies, the practice of inquiry is a spiral process that begins with the 'curiosity of the learner' (Bruce & Casey, 2012, p. 193) and invites exploration, experimentation, experiencing, problem-solving, analysis, collaboration, constructing and communicating new understandings (Bruce & Bishop, 2002; Bruce & Casey, 2012; Chiarotto, 2011). Like other researchers (Wang, Kinzie, McGuire & Pan, 2010), several of us have discussed elsewhere this fusion of iPads and inquiry (Harwood et al., 2015). Here, we again revisit this thinking and underscore iPads as an invitational space, an 'affinity space' (borrowing Gee's 2004 concept) – a classroom context where children engage in socio-critical negotiations that are at times collaborative while also fluid and discursive (Winters & Memme, this volume). Thus, the iPad, a 'placed resource' (Prinsloo, 2005) that is contextually relevant for young children, acts as a provocation and an important milieu for children's play and learning.

THEORETICAL MUSINGS

Several chapters within provide an in-depth discussion of the theoretical rationales underpinning the book. Here, I will simply outline our collective theoretical musings to help position the reader. Rowsell, in this volume, begins this thought

process by underscoring how materialism/post-humanism, multimodality and place-based theories help to situate objects like the iPad as important contextually bound resources for play and meaning-making. Similarly, Rose, Fitzpatrick, Mersereau and Whitty (this volume) also emphasize and illustrate this material relationality between iPad minis, children, educators and the many *assemblages* enacted and provoked by the nature of inquiry pursuits of one early childhood classroom. In this volume, Winters and Memme discuss the ways in which iPads contribute to the discursive-construction of identity and positioning within children's socio-critical play and learning interactions. In addition, these two authors also provide practical insights associated with integrating iPads within an inviting, inquiry-based classroom context. Collectively, we all view the 21st-century child as capable and competent with a particular disposition towards technology (Harwood and Scott's discussion of digital habitus in this volume). We argue the digital habitus of children is unique given the technological culture they are a part of, challenging educators to recognize the ways in which children's ways of acting and being are shaped with/alongside technologies. Furthermore, the practical issues associated with integrating iPads within ECE are also highlighted; topics such as digital divides (Lane, this volume), diversity of learners (Di Cesare, Kaczorowski & Hashey, this volume), empowering readers and writers (Woloshyn, Grierson & Lane, this volume) and challenges associated with discerning quality within iPad applications (Di Cesare, this volume) are also considered.

Intentionally, the beginning chapters focus on the theoretical foundations supporting the research studies discussed and the researchers' framing. In the latter sections, the book offers practical insights and research-inspired stories of how young children think, play, experience and intra-act with digital worlds and technologies. iPads (among many other objects and other forms of technologies and mobile platforms) are important to young children. Hillevi Lenz Taguchi (2010) reminds us that the child and world are 'entangled becomings' (p. 47) – dynamic, mutually interdependent agents contributing equivalently to knowing. Consequently, as educators and researchers, we are challenged to find ways to appreciate the naturalized ways children move in and out, within, between and among these formal and informal spaces, both digital and non-digital.