

By-passing the debate: beyond the ‘technology question’ in the early years

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What is the role of digital technologies in early childhood education? There has been a great deal of research conducted into this question and yet, we still seem no closer to understanding how to best use technologies in early childhood classrooms (Yelland, 2011). In fact, there is still some suggestion that technologies do not belong in early childhood settings because of the impact they are perceived as having on young children’s imaginative play (House, 2012). These arguments take the field of early childhood technology research back to the years when debates raged regarding the ‘technologies have lots to offer’ (Clements and Sarama, 2003) versus the ‘technologies are damaging for children’s development’ perspectives (Cordes and Miller, 2000).

Meanwhile, the world has moved into an era of technological digitisation (Wohlwend, 2010). Information is communicated in new forms – digital photographs are taken and shared online, movies are recorded onto mobile phones, children’s television programmes are internetworked across mobile technologies and involve opportunities to play games as well as consume content (Parette *et al.*, 2010). When we talk about digital technologies in early childhood education we should no longer be just talking about whether or not technologies impact the quality of children’s play. We need to be thinking about what and how children play with technologies and trying to understand what this looks like and how children are learning about technologies with their families and in their homes and communities.

For the last year I have been visiting families with very young children in Melbourne, Australia, to hear from parents what type of technologies their children use (Edwards, 2013). This has included children as young as 20 months up to five-years of age. So far ten families involving 14 children from a lower-middle socio-economic setting have been involved. Two separate visits conducted eight months apart have been conducted. A third visit will be completed in another twelve months meaning that the families will have been visited over a two-and-a-half-year period enabling the children’s technology use to be charted across the age span from toddlerhood into the early years of school.

The families described very young children being aware of technologies and the uses of technologies. The earliest technology use by children is prior to one year when infants are able to use touchscreen phones to look at apps™ parents have downloaded for them. Whilst it is easy to think of this situation with horror, the apps are, in fact, being used by parents at particular times to meet certain needs. For example, an infant will be given a ‘phone whilst waiting at a doctor’s surgery or when queuing at the supermarket and parents want to keep children settled. Slightly older toddlers are described by parents as being very aware that mobile ‘phones not only take digital images and movies but that these can be viewed at any time. Parents suggest that children make frequent requests to view such images and that they enjoy sitting with children and discussing the particular situation or occasion that has been recorded. Pre-schoolers were identified by parents as having interests in using technologies such as iPads™, console games and, in particular, watching television. Many parents of pre-schoolers talked about the way children would role-play the characters they had watched on television. A frequent theme was children integrating their own

experiences with their interpretation of how that character would behave. Parents thought this was useful play for their children because they were acting out characters they were interested in and relating these to their own lives. Some parents liked to support this type of play by giving children props so they could dress up or use the family couch as a location for the play.

Parents were also able to describe the development in their children's technological expertise and awareness eight months after the first interview. For example, one mother reported her now 28-month old daughter as learning how to swipe the 'unlock' function on her touchscreen 'phone so that she could access the different apps she knew were available. A two-and-a-half-year old boy was described as being able to turn on a desktop computer, and a five year old boy was reported to call out to his mother when he heard the Skype™ dialling tone on the family computer that "Nanny is trying to Skype you".

These home uses of technologies do not seem to indicate a lack of richness for children's play opportunities. As research has identified, such technology use is embedded in existing social structures and interactions within families (Plowman *et al.*, 2008). So babies are first introduced to apps when parents want to distract and entertain them. Older toddlers learn the range of social interactions associated with digital image taking and viewing. For example: When do we take a photograph/movie? Why are they taken? In what ways do we consume and re-consume the narratives these images tell with our family members? Pre-schoolers use role play to make meaning about what they watch on television according to what has been happening in their lives and parents happily scaffold such play by providing children with access to props for extending the experience. Visiting these families in their homes it seems that the debate regarding the role of digital technologies in early childhood education has by-passed them. The technologies are there in the families, being used by adults for particular purposes and young children are playing with them and learning what technologies can and cannot do. The question of what role technologies have is almost obsolete because they have very clear social and cultural purposes, including communicating with others, documenting family occasions and being used as entertainment.

That the 'technology question' which still seems to preoccupy early childhood education may in fact have by-passed the families early years education is intended to serve, is not really remarkable at all. Sociocultural theory has been telling us for years that children acquire and master the cultural tools of their situations (Göncü and Gaskins, 2011). We know that observational learning is important, modelling matters, scaffolding helps and meaningful use of tools provides opportunities for practice (Rogoff, 2003). This seems to be what is happening in families and so an infant who is able to unlock an iPhone™ or a toddler who turns on a computer to access an online game should be seen as participating in viable cultural activity. Asking whether or not this activity impacts her imaginative play and, therefore, questioning whether it has a role in her educational experience, is a bit pointless. It is like asking whether or not using a pencil impacts a toddler's imaginative play and then debating whether or not pencils should be used in the early years.

The more interesting question might be 'what type of experiences in the earlier years support young children's technological exploration?' Early childhood education has actually already been asking this type of question for a very long time. For example, the use of clay in some early childhood classrooms is intended to help build young children's finger strength and hand-eye coordination as support for learning to write. Likewise, wooden blocks are often used to foster an awareness of

space and geometry for later mathematics learning. , in a more digitally mediated era, what should we offer those children who come to the early years classroom understanding how to operate touchscreen technologies and heading towards needing to be able to take, manipulate and share digital imagery? Should we be paying more attention to the range of apps that let pre-schoolers create, narrate and store digital stories? Should we be thinking more carefully about how children's media inspired play is being recognised in the home as a site for learning? Perhaps mobile technologies need to be as freely available and common as the use of blocks in the block corner?

These questions are not intended to displace historically valued practices and ideas about play. But they are intended to help focus the learning aspect of the early years more closely with children's contextual experiences of technologies typically used in their homes and families. In this way, we can move beyond focusing on the technologies and debating to what to what extent they should be present in the early childhood classroom, to thinking about the social practices associated with technologies. Thinking socially helps re-orientate the 'technology' debate towards consideration of the role of education in equipping children to participate meaningfully in the social activities that constitute their life experiences. After all, it was Vygotsky (1997) who argued that ultimately only real life educates (p. 345).

References

- Cordes, C. and Miller, E. (2000) Developmental risks: the hazards of computers in childhood. Chapter in C. Cordes., and Miller, E. (Eds.), *Fools Gold: a critical look at computers in childhood* (pp. 19-44). Alliance for Childhood: New York.
- Clements, D.H. and Sarama, J. (2003) Strip Mining for Gold: Research and Policy in Educational Technology—A Response to 'Fool's Gold'. *AACE Journal*, 11(1), 7-69. Norfolk, VA: AACE.
- Edwards, S. (2013) Post-industrial play: understanding the relationship between traditional and converged forms of play in the early years. Chapter in J. Marsh., and A. Burke (Eds.), *Children's Virtual Play Worlds: Culture, Learning, and Participation*. Peter Lang: New York.
- Göncü, A., and Gaskins, S. (2011) Comparing and extending Piaget's and Vygotsky's understandings of play: symbolic play as individual, sociocultural and educational interpretation. *The Oxford Handbook of the development of play*, (pp. 48-57). Oxford: Oxford University Press.
- House, R. (2012) The inappropriateness of ICT in early childhood education: arguments from philosophy, pedagogy and developmental psychology. Chapter in S. Suggate and E. Reese (Eds.), *Contemporary debates in childhood education and development* (pp. 105-121). Routledge: New York.
- Parette, H., Quesenberry, A., Blum, C. (2010) Missing the boat with technology usage in early childhood settings: A 21st century view of developmentally appropriate practice. *Early Childhood Education Journal*, 37, 335-343.
- Plowman, L., McPake, J., and Stephen, C. (2008) Just picking it up? Young children learning with technology at home. *Cambridge Journal of Education*, 38(3), 303-319.
- Rogoff, B. (2003) *The cultural nature of human development*. Oxford University Press: Oxford.
- Wohlwend, K. (2010) A is for Avatar: young children in literacy 2.0 Worlds and literacy 1.0 Schools. *Language Arts*, 88(2), 144-152.
- Yelland, N. (2011) Reconceptualising play and learning in the lives of young children, *Australasian Journal of Early Childhood*, 36 (2), 4-12.
- Vygotsky, L.S. (1997) *Educational psychology*. Boca Raton, Florida: St Lucie Press.