All about…converged play

Young children playing and learning with digital technologies xxxxxxxxxx Professor Elizabeth Wood, Aderonke Folorunsho and Liz Chesworth, University of Sheffield, School of Education

Pics to come – author/speaker pics for Show box in text

Although we are living in 'the digital age', there remain heated debates about children's use (and over-use) of digital technologies. It is claimed that young children have become slaves to devices, to the extent that family life, mental health, traditional play and outdoor play are being compromised because of too much 'screen-time'. Digital content is also a concern in games and social media, especially violence, aggression, anti-social and discriminatory behaviours. But none of these concerns or media panics addresses the central questions of why children are enthusiastic and rapid adopters of digital technologies, what they are doing with those technologies, and what might be some of the benefits for their learning and development. We understand that these topics arouse strong feelings for early childhood practitioners, so we aim to set out some new positions from which these problems can be understood.

DIGITAL TECHNOLOGY AND THE EYFS
Digital technologies encompass a wide range of electronic tools, resources and devices, such as smart televisions, phones, cameras, and tablets, that serve multiple purposes, and can switch from work to play to education, as well as recording and storing information.
Many of these devices interlink and interact and their appeal to children includes this flexibility, along with opportunities offered for developing their interests, making choices and being agents who co-create their own activities. Digital technologies are here to stay, and are rapidly evolving in their power, functionality and potential – what they can do for us, and what we can do with them.
So, it is puzzling that in the proposed revisions to the Early Years Foundation Stage all references to technologies have been removed. And it is all the more troubling that the EYFS makes no mention of digital technologies for children with special or additional needs.
A head teacher of a digitally-resourced school stated that digital technologies don't just make a difference, they make all the difference for children to access and co-create their own curricula and learning experiences. So, the EYFS commitments to providing adult- and child-led play, building on children's interests, and ensuring inclusion, are curiously exclusive of digital technologies.

CHALLENGES FOR PRACTITIONERS
Looking at the research on play and digital technologies, there are a number of problems that need to be considered:
• Why do practitioners seem to be reluctant to incorporate digital technologies into children's play?
• What do we know about the digital technologies that children are accessing in home and community settings, what they are doing, and what they are producing?
• Why is there a gap between practitioners' use of digital technologies in pre-school and school settings, and children's home-based experiences?
• What do practitioners know and understand about children's interests and motivations, including how they control and use technologies creatively in their everyday lives?
• What are the implications for practice and provision?
Our recent research projects offer some practical examples of children's uses of digital technologies, and how practitioners might adapt their provision.

CONVERGED OR CONNECTED PLAY
Toys and games designers have aligned digital technologies with children's capacity for play. This is where we see the power of popular culture in traditional and digital play, and educators as well as families may be concerned about the impact of consumerism on children's lives. This takes us to an important concept for understanding children's contemporary play.
Converged or **connected** play proposes that there is no distinction between digital and traditional play. Instead, children move fluidly across and between different modes. Converged play occurs when children use a technology and/or are inspired by popular culture characters to participate in traditional play activities. For example, children might watch a Bob the Builder™ DVD and then dig and build in the sand pit using everyday resources.
Converged play also occurs when traditional activities are enacted using technologies, such as using craft, painting and drawing apps on a tablet or computer. Converged play is multi-platform

and multi-modal, because children use different technologies and resources, which enable them to act and interact in many different ways.

This seamless to-ing and fro-ing helps to extend rather than restrict children's repertoires for playing and learning. The following vignettes are taken from Aderonke's PhD research on children using iPads in a pre-school setting. The focus here is on the children's play-based activities and interactions with Aderonke.

Adult-child interaction

LG chooses 'Max and Ruby'. The game starts. She taps on 'Ball-o-rama'. She is using her right thumb and index finger to try and drag the ball into the designated hole. She can't get the ball into the hole.

'She doesn't know how to do it,' one of the children tells me.

Aderonke: 'She can do it, she just needs to learn how.'

LG continues to try and get the ball into the hole.

Aderonke: 'Press the ball down and let go in front of the hole.'

LG tries by holding the ball down with her thumb and gets the ball into the hole. She smiles as she gets this.

Child-child interaction

A list of items appears on the screen for JB to put in his shopping cart. He focuses intensely on the items on the shelves as Peppa Pig, Daddy Pig and George pass the shelves. He concentrates on the items to find what he needs and puts them in his shopping cart. As he finds the items, he taps them into the shopping cart.

'No, George,' JB says. One of the characters, George, has put an item that doesn't belong in the shopping cart.

'Put in the carrot' one of the children sitting and watching tells JB.

'No, it doesn't say I need carrot. My list says strawberries, rocket, apples and ketchup,' JB replies.

10:40: 'Bananas,' says another child.

'No bananas,' he replies.

One of the children tries to put a toy aeroplane in the trolley.

'No, we don't need that aeroplane. We need a rocket,' he tells the child.

JB taps on the shopping cart.

Adult-child interaction

10:10: The next puzzle is a Lego building. I notice the look of confusion on his face. He looks up at me.

'I don't understand this one,' he tells me.

Aderonke: 'Keep trying, look at the Lego blocks and see where they should go.'

He uses his finger again to move the pieces of the puzzles in the right places. He gets it right.

'Yaaaaaay,' shout his friends. LB blushes and looks very happy playing this game.

10:12: The next puzzle is a bit hard for LB because he is finding it difficult to fit the pieces together.

'Put that one first,' his friend suggests. He nods in agreement and uses his right index finger to move the puzzle piece his friend suggested. It fits perfectly. He now moves the second piece to complete the puzzle.

His friends collaborate by saying 'yaaay' when he is getting it right and 'noooo' when he is getting the puzzles wrong.

Learning skills

So, what can we understand about playing and learning from these vignettes? First, the children are demonstrating many of the same skills as in traditional play:

• Taking turns
• Sharing interests and ideas in open-ended ways
• Talking and interacting with peers and an adult
• Extending each other's thinking, problem-solving and creativity
• Providing assistance – helping each other to learn new skills or techniques
• Solving problems and persevering with difficulties
• Developing skills and knowledge
• Learning the rules of the games

What, and how they are learning is also similar, with access to activities that promote sorting, matching, following rules, developing language, being sociable, making connections with everyday

knowledge. Aderonke interacts with the children in responsive and supportive ways, at the appropriate moment, which is key to enabling children to sustain their play.

PEDAGOGY AND CURRICULUM: IMPLICATIONS

There are implications for practitioners in terms of what might need to change to accommodate converged play into the curriculum. We also need to consider what pedagogical approaches can support converged play.

The following example is taken from a research project funded by the Australian Research Council. This involved teachers in pre-school settings recording, thinking and talking about converged play, and mapping children's use of digital technologies in the curriculum.

In this case, converged play involved Raphael's popular culture interest, the knowledge that he brings to the setting, and Josie's strategies for building on his interests through the planned curriculum.

Josie focuses on Raphael who was fascinated by Monster Trucks – large over-sized vehicles that compete in races on muddy tracks. Footage of these races is available on YouTube. Raphael liked to talk about Monster Trucks and enjoyed re-enacting Monster Trucks in his play. Josie planned to extend Raphael's interests into outdoor play.

First, she watched some Monster Trucks footage with Raphael on the iPad, also projecting this onto the large overhead screen in the classroom, which enabled several other children to participate with Raphael in the discussion. Then Josie, Raphael and the children viewed a YouTube tutorial on 'How to build your own Monster Truck track'. Josie explained what happened in the outdoor play area:

So, then we went out to the digging pit. And we dug it up – and the boys said, 'Remember we have to dig this, remember there was – oh, we have to do the digging first, then the water.' And I said, 'That's right.' Then they said, 'Now, remember we had a driver here and a driver there.' So, we made this big track. There was lots of negotiating going on, because some children wanted to get straight into it [driving the trucks]. And Raphael was going 'No, no, it's not ready! Needs to be more muddy – it's not ready yet.'

Someone would drive through and somebody goes, 'We only drive through one way, remember you drove through this side and out the other side.' We were probably out digging for an hour or more.

After the track was completed, the boys accessed the large outdoor toy trucks from the shed. Josie filmed the children as they raced the trucks around the track, then shared the film on a large screen during group time. Raphael led a discussion and explained how the track had been designed and built.

We can see from these examples that converged play means that practitioners can sustain their commitment to child-centred principles and to child-initiated play. Building on children's home-based and popular culture interests and knowledge is central to integrating digital technologies into the curriculum.

MAKING AND DESIGNING

These flexible approaches to learning can also be seen in Liz Chesworth's work in the MakEY project with Professor Jackie Marsh, which looks at the development of children's digital literacy and creative design skills.

Founded on the principles of play, MakEY activities involve children in Makerspaces in pre-school, school and community settings, working, playing and creating alongside artists, designers and makers as well as family members and teachers. They have a wide range of everyday materials and digital resources that support creativity and open-ended activities. For example, in the 'Light and Colour' project in Broomall Nursery School, Sheffield, children aged three to four learned how to make circuits using batteries, LED lights and leads.

They used the circuits in a range of creative projects, such as making torches, which were then used to create lightshows in a blackout tent using an App named 'Pablo'. The children also created drawings that lit up, using copper tape and LEDs, and made animated films using transparent plastic shapes and lights.

WAYS FORWARD

Digital technologies and converged play mean that established boundaries are no longer useful - play/work, formal/informal learning, digital play/traditional play, on-line/offline, digital/analogue, child-led/adult-led. This is because digital technologies are changing the ways that children and adults interact with each other and with the technologies. If we accept the concept of converged

or connected play, then it becomes possible to think about new approaches to pedagogy, and understanding children's agency:

• Children can expand their repertoires of interests and activities, their choices, their knowledge, skills and understanding.

• Knowledge is power, and children are motivated to become more knowledgeable about interests that are generated with peers and adults.

• Play, playfulness and creativity are enhanced and not threatened by converged play. (See www.eureka.org.uk Fusion: adventures in digital art)

• Educators can support, mediate, lead, follow, suggest, value and enhance converged play through planned and responsive approaches.

• Providing a balance and range of indoor and outdoor activities supports converged play.

• Educators need to become as confident and 'savvy' as children are about digital technologies. Although we have presented positive arguments for embracing digital technologies and children's contemporary play worlds, we acknowledge ongoing challenges. As with all things in life, balance is important. Learning about internet safety and awareness of potential dangers is a shared concern for families and educators, especially for children's mental health and well-being. Limits on when, how much and where digital technologies can be used are reasonable, and this could be encouraged by enabling children to develop connections across many different forms of play and creativity.

Professor Elizabeth Wood is head of the School of Education, Dr Liz Chesworth is a lecturer and Dr Aderonke Folorunsho is a research assistant at the University of Sheffield

Column
MORE INFORMATION
The proposed new EYFS goals are at: www.foundationyears.org.uk/wp-content/uploads/2018/06/EYFSP-Pilot-Handbook-2018.pdf
For inspiration and the latest information about the MakEY project, visit: http://makeyproject.eu/
Aderonke Folorunsho (2016) Young Children's Engagement and Interactions with Digital and Non-Digital Activities: A Case Study. Unpublished thesis for the degree of PhD, Canterbury Christ Church University.

Box
Nursery World Show: converged play
To find out more about converged play and the learning potential of digital technology join us at the Nursery World Show, where the theme of Saturday's masterclass, on 2 February, will be 'Playing and creating in a digital world'.
Professor Elizabeth Wood, of the University of Sheffield, will look at the importance of play, chart the emergence of converged play and assess its implications. Members of the Balham Nursery School team will explain how they addressed their concerns about digital technology, which they now use in creative and complex ways to support children's investigations and learning.
Dr Liz Chesworth, also of the University of Sheffield, will report on the MakeEY project, which is exploring new pedagogies to inspire creativity and advance digital learning in line with best early years practice.
For the full seminar and masterclass programme and to book a place at the Show, to be held London on 2 and 3 February, visit: www.nurseryworldshow.com