

Section 1

This paper firstly focusses on an i-pad tablet and secondly a games console.

Edwards (2013) stated that in the 21st century digital age, children have access to digital devices including iPad tablets at an early age and in this social cultural theory, children acquire the knowledge needed earlier and at a young age with modelling and scaffolding within the family environment.

As stated Question more (2015) traditional games and puzzles are being replaced and children are being entertained by more advanced technical toys and devices. Research has discovered '97 percent of US children under the age of four use mobile devices, regardless of family income'. (Question more,2015: 1). The report also exposed that '20 percent of one-year-olds have their own tablet computer and that 28 percent of two-year-old's can navigate a mobile device without help.' (Question more,2015: 1) According to Flewitt *et al* (2015) that due to the increased obtainability, affordability and effectiveness of digital devices within technologies, young children have an added alternative to traditional play activities.

However, Dormehl (2015) stated that Steve Jobs, the founder of Apple would not allow his children to have an iPad for fear that they would become technology addicts and yet, has made a fortune from the public consumerism of his devices, this could be considered an ethical debate. Dormehl (2015) points out that according to a leading child psychologist Dr. Richard House letting a very young children play with an iPad might be the "equivalent to child abuse and argues that that the electronic images seen on an iPad screen can result in children having "an indirect and distorted experience of the world." Dormehl (2015: 1).

Digital competence framework (DCF) (2018); Burke and Marsh (2013) suggest use of a digital camera for instance on an iPad enables children to create and record their experiences such as a trip or an activity and therefore discuss in the classroom. This enables children to form interactions, through careful layout of a classroom for example, consider the set-up of the iPads on a table to encourage and support social interaction and discussion, an iPad can enrich the digital competence of children by inspiring a collaboration in a learning environment. Aubrey and Dahl (2014) view the shared activity as this is reinforced by Vygotsky's theory and is seen as fundamental in a child's learning process establishing the concept of the more competent or

knowledgeable other and this could include the child, adult and the iPad alone or collectively.

However, Donohue (2014) argues this needs to be monitored as not to isolate the child from social interaction for instance, the apps or tool on the iPad needs to support interaction and discussion. To be compatible with age and stage of the child and ability, therefore, careful screening by the adult of applications and observations of iPad use to allow for this needs to be addressed. This concurs with Van Son (2011) who stated that historically when text books and blackboards were thought to be a valuable resource, ICT, in education has been transformational. Although, observing that as some text books are not as informative, the same could be said for some but not all applications on ICT devices. ICT skills and digital literacy needs to improve, expand and compliment education for the generation that is now entering a mainly dominant digital era.

Heider and Jalongo (2014) consider the increased accessibility to the internet, young children have access to and increased applications on the devices, encourages full participation to digital media. However, Garvis and Lemon (2015) although slightly dated is relevant, argue, consideration should be addressed within the child's socioeconomic environment hence that it cannot be presumed that all children have equality, access and availability to digital devices and internet. However, this could potentially result in feeling isolated from friends and family and effect their digital competence due to school work preparation and homework relies on digital devices and internet connection such as hwb etcetera. (de Block and Buckingham,2010)

Furthermore, Department of Education (DOE) (2019) on the 20th February 2019, the Education Secretary Damian Hinds has broadcasted that families from underprivileged circumstances will be given free access to some of the best children's educational apps for smart phones and tablets, 20th February 2019, encouraging parents to think about how to use their children's screen time constructively. However, according to Chassiakos *et al* (2016) states that those families who come from a poorer background are less likely to use a mobile device for educational purposes than higher income families.

According to Trigg (2019) parents should demonstrate a positive attitude and show good practice when using an iPad as this can be observed by the children. If the

parents overuse their own iPad it is more likely that the child could possibly overuse or misuse their own iPad. Boundaries need to be set and established, therefore, families need to incorporate a clear set of family rules for both parent and child. Heitner (2014) advises and gives support on this topic and talks about the anxiety of parents when children are exposed to digital media. The use of the seven steps guideline, advises and is a useful tool for parents, helping to set boundaries for example impose agreements when necessary and set time limits on iPad usage, including parental controls and monitor screen time.

However, Chassiakos *et al* (2016) suggests that mobile device screen time has a negative impact on quality sleep especially in young children and in older children can affect sleep difficulties and can cause depression, resulting in potential future mental health issues effecting a child's health and wellbeing. Palmer (2016) stated that iPads are used as pacifiers for very young children and stated it has replaced the comfort blanket, for those children barely able to walk are able to swipe the screen of an iPad.

Furthermore, Sigman (2012) reports in the Uk a child has regular access to an average of five various screens at home by the time they are ten years old and this is a child's main leisure time. In recent research the amount of screen time has been seen to have an adverse effect on a child's health linking it to type 2 diabetes, high BMI count and HPA stress-regulation through increased screen time. A trial was constructed of children aged between 4-7 years old where half had screen time restricted and the other half did not, resulting after three years of a significant reduction of the BMI in those children who had their screen time restricted and interestingly, the BMI of those who did not have a reduction in screen time showed very little BMI reduction.

Chassiakos *et al* (2016) concurs that when used constructively iPads can have a positive influence and have beneficial aspects for the child and parent, for instance, social interaction, an iPad can help distant and absent relatives keep in touch using face time, a tool for communicating. It can provide a connection to family members and friends by sharing information of the child's development and learning experiences in nurseries and schools through educational potholes such as twitter and similar sites. Parents and friends can have shared experiences discovering shared interests to both, involving games, photos or creativity applications (Berson and Berson 2010).

Cocozza, P (2014) Digital games on an iPad can provide a more inclusive environment for an additional learning needs (ALN) child and can engage them more effectively using specialist and stimulating appropriate applications enabling a calming affect with the use of the touch screen as a sensory tool to meet the needs of the individual child. As part of research it was observed ALN children were completely immersed and engaged on working on a story book independently, without any intervention from an adult whereas without an iPad previously unable to participate without support from an adult. Cocozza, P (2014) However, Palmer (2016) stated that her colleagues who are in the profession of child development have witnessed an increase of prescriptions for Ritalin, a medication for attention deficit and hyperactivity in the last decade.

However, according to Heitner (2014) helping and guiding your children in everyday situations on social decorum is part of parental guidance but when it comes to the online world it can be more difficult for parents to establish and potentially comes with a different rule book.

Vodafone UK has joined with Andersen Press to produce a co-branded pre-edition children's book called Goldilocks. This is an online book and comes in a hard copy. It has an audience aimed at children between 5 to 11-year-olds, although, could include younger age children if adapted to an appropriate level of understanding, it is a tale of the consequences of oversharing online. The popular children's story has been overhauled for the digital age by award-winning author Jeanne Willis in partnership with leading illustrator Tony Ross. It is a good base for discussions about being kind on social media and other digital ground rules. However, this could be seen to be unethical as one of the main promoters of this online eBook is a major mobile phone company. (Wersm 2018).

Children enjoy and feel happy when participating in game playing using a console and it can have many benefits. There are many game consoles that encourage physical activity, through moderate and regular use it can help develop eye and hand coordination, aiding everyday activities and help sports performance. It can help reduce stress and encourage social interaction with peers and friends through connecting to online gaming. Although, caution is needed and privacy settings are required to safeguard children from strangers who can connect if no restrictions are in place. Cenyon (2016).

According to Teaching times (2019) British Educational Suppliers Association (BESA) during a recent research schools view that games consoles play a significant role in primary aged school children's education. The results indicated that educational game consoles for instance Nintendo DS as it encourages activeness benefits children's development. Teachers favoured children have access to a games console rather than a mobile phone

Chassiakos *et al* (2016) points out that most families have a game console and it is a favourite as interactive pastime for families to participate thus making it socially inclusive. The term gamification is used meaning a practice of making activities more like games for them to be more fun and interesting. The benefit of this is it encourages children to have wellness goals for instance, exercise apps from a mobile game console or smart device that can connect to the games consoles and therefore have the element of competition with friends.

According to Robertson (2018) highlights the concerns parents have about gaming and have the notion that digital devices such as smart phones, video games are toxic and damaging their children. There is a limited amount of studies that does suggest a link between video games, technology and anxiety, but according to Robertson, there is not enough evidence out there to suggest this is all true.

However, Borland (2011) stated that children are inactive while playing games such as Xbox and ps4, reporting that children raid the fridge to eat when game playing and therefore the brain is not registering food consumption, helping to understand and explaining the obesity levels in children. To help this it has been suggested that companies produce more game consoles that encourage being active for instance,

the Wii, as the World Health Organisation has named computer games a major reason of childhood obesity.

Sigman (2012) concurs that the raising obesity level in children is due to being inactive and type 2 diabetes due to prolonged screen time, thus effecting sleep and causing concerns for children wellbeing due to poor sleep. Chassiakos *et al* (2016) agrees that poor quality sleep has a detrimental effect on children, by playing violent games especially late at night in the bedroom contribute to poor sleep in children added to this is the melatonin by blue light produced from screens is also a conceivable contributing factor.

However, Christopher, D. (2019) points out alarming indicators of game addiction, if the child has no other interest other than gaming and is reluctant to partake in any extracurricular activities other than gaming. This has a serious impact on the mental and physical health of the child causing loss of appetite and poor-quality sleep but also can cause headaches, eyestrain and capul tunnel syndrome which causes numbness in hands and joints.

Friedmen (2018) highlights that whenever there is new technology it provokes a panic from various professionals and parents, like the television was to blame for the youth cultures problems years ago. Parents are blaming digital technology available including iPads, mobile phones and gaming consoles, for their child's anxiety

However, technology and digital media move so fast and children have embraced it so quickly, it's been difficult for parents to control it. The long-term impact is not known and when it comes to spending a childhood in front of a screen, there is a generation that are a little like guinea pigs. (Palmer,2016).

According to Livingstone, (2017) suggested the United Nations Convention on the Rights of the Child (UNCRC) needs to reflect on today's digital world and that the rights are the same online and offline, the rights of the child need to incorporate a digital environment. This is supported by England's Children's Commissioner (2017) Anne Longfield, stated that governments are requesting support in addressing children's digital rights, governing the rights of the child online.

Section 2

Activity: Shape hunt

The classroom theme for the day is about shapes and throughout the day all activities are based on shapes. This links the ICT activity, described as follows: -

The activity involves reception child aged between 4-5, to work in pairs and take photos of shapes and voice record shapes they took photos of, the activity was both indoors and outdoors with an iPad within a school setting. Taking it in turns, with the help of an adult, the children upload them onto a white board and in pairs talk to and interact with the children about their findings in the class about the activity. Once all the paired children have had a turn, the whiteboard has an interactive game on it where the children will have to find and write the name of the shape, this will be initially supported by an adult. Available on the iPads will be shape games for the children to access independently during free flow play.

The activity was supported by Foundation Phase Framework (2015) and during the shape hunt activity outcomes were achieved, the children were given opportunities to develop their skills, knowledge and understanding through using the outdoor area. The children enabled child led and initiated play through choosing to use the iPads and whiteboard when given free flow play. While working in pairs on the shape hunt the children implemented paired learning. The children were able to explore and experiment with a variety of ICT resources including the whiteboard and the use of iPads. There were opportunities for the children to build on prior knowledge and experiences aiding their cognitive development and supporting them to become independent learners. The activity supported their creativity and used their senses when using the iPad touch screen and when outdoors exploring their own environment. As the main objective was to find shapes the children took on the challenge and remained on task, this encouraged discussion and problem solving as they continued with the activity. Foundation Phase Framework (2015)

Although the activity was facilitated by an adult the children made their own decisions. Incorporating the strands of the Digital competence framework (DCF) (2018) During the shape activity the children collaborated with a partner to produce a piece of digital work on the iPad and showed storing and sharing capabilities by retrieving the work. The children showed planning, sourcing and searching as they understood that the

picture of the shape needed to be central when taking a photo. The children used to evaluate and improving and were able to add a comment using a recording feature. The children uploaded the information from their findings and therefore used the strand of producing (DCF 2018). Furthermore, Estyn (2016) have stated that where schools have adopted and embraced the DCF to develop and benefit learners to improve the practice, Estyn would approve and be encouraged by the forward thinking of the school. Additionally (2018) The DCF is inclusive of all children of Wales, thus incorporating and integrating for children with additional learning needs, in providing Routes for learning skills, these are the first skills developed that form the foundation and provide individualised stages for each learner.

However, when the children were listened to it appeared that the children did have some difficulty negotiating the iPad as it was large and slightly difficult to hold accurately while taking a photo and it was suggested by the children to have an iPad cover that was easy to hold the iPad. (Hart,1992).

ICT should be holistic and integral experience across the curriculum. Although there are many aspects of this activity that offers cross curricular learning, it is the digital literacy element of the activity in which the main attention will be focused on and this concurs with the National Literacy and Numeracy Framework (LNF) (National Literacy and Numeracy Framework (NLF) 2014). According to Donaldson (2015) states in the review of Successful futures, digital competence is as vital as literacy and numeracy. A digital competence framework and an additional 'Routes to Learning Digital Competence' should be developed and be encompassed as a Cross-curriculum Responsibility. Thus, digital competence potentially aids a secure future for the next generation of adults helping to improve the chance for success and this is a primary concern for educators. Van Son (2011).

As stated by the Digital literacy framework (DCF) (2018) there are many instances of classroom activity ideas that can be used to develop skills, in naturally occurring meaningful ways, to support digital literacy. Donaldson (2014) states in the review of Successful futures it recommends methods to support learner's social and emotional well-being to provide opportunities for the development of expressive ability and metacognition. Hence, Learners can reflect on their own learning and recognise the positive influence that they potentially have on the learning of other children. This

supports Bruner's theory of the more knowledgeable other and the use of scaffolding for example, in the described activity this could be represented by the child, adult, and the iPad (Teaching Times 2019). Foundation Phase Framework (2015) supports that Children's literacy skills should be developed within a varied assortment of practises presenting information that involve children discovering and evolving data and concepts creatively. The progression of children's digital literacy should demonstrate age and stage appropriation of the child's developmental position based on Piaget's cognitive development (Foundation Phase Framework 2015), (Donaldson 2014). Digital literacy should support, opportunities and availability of a variety of choice of digital technology tools to help develop the children's skills within the early years setting. McManis and Gunnewig (2012) support new digital tools such as iPads and their unique applications help children by offering children to engage and partake in valuable targeted activities such as the shape hunt. Laidlaw and O'Mara (2011) stated the inbuilt cameras and recording elements of the iPad helps children to use the world around them to create and connect to their own interests and sharing with audiences, hence, the shape hunt activity encompasses and allows for this narrative. For example, the iPad within the activity lends itself in this way aiding the children to explore the environment they are in, both indoors and outdoors Furthermore, extending the digital literacy further by incorporating the whiteboard, allowing children to add to their learning and develop opportunities for discussions and shared thinking therefore expanding and enhancing the literacy experience.

However, Donaldson (2014) stated in the successful futures report that early years staff should demonstrate the knowledge and skills to implement digital competence in children. Aubrey and Dahl (2014) supports that early year's practitioners need a better understanding and competency involving digital literacy, if all staff have the same competence all children have the same opportunities.

Reggio Emilia, theory supports that children can lead their own learning and was demonstrated in the shape hut activity, although influences of Bruner's scaffolding theory is clearly facilitated in the activity demonstrating child-led and adult led was combined (Rinaldi 2006), (Teaching Times 2019). However, Piaget underrated the role of the adult, unlike Bruner, in the learning environment but Piaget's aim that there existed conditions of learning similar that of Vygotsky's zone of proximal development in which children are influenced within their own environment (Rinaldi 2006).

Under the United Nations Convention on the Rights of the Child (UNCRC) and the Welsh Government's overarching strategy document Rights to Action (2004), all children and young people must be provided with an education that develops their personality and talents to the full.

(Van Son, 2011).

Information for Parents and carers of young children on ICT and Safeguarding.

What are schools doing to help and support children with digital literacy?

'The Education Act 2002 further strengthens schools' duty to safeguard and promote the welfare of all children and young people.'
(Department of Education (2002, 175)).

Article 16 (right to privacy) Every child has the right to privacy. The law should protect the child's private, family and home life, including protecting children from unlawful attacks that harm their reputation.
Unicef (1992).

In the successful futures report Graham Donaldson's review wants all foundation phase children to demonstrate the knowledge and skills to implement digital competence. Donaldson (2014)

Digital competence is the set of skills, knowledge and attitudes to enable the confident, creative and critical use of technologies and systems. It is the skill set that enables a person to be a confident digital citizen, to interact and collaborate digitally, to produce work digitally and to be confident in handling data and computational thinking (problem solving).
(DCE, 2018, 6)

This guide is to help parents and carers to be aware and not to scare!

Here are some interesting facts....

50% of children feel they are addicted to their phones!

At 24 months a child can learn words from facetime

3-year-old children use a mobile device on a regular basis and by the time a child is 1 years old they have used a mobile device.

6-12-month children showed significantly less sleep after exposure to screen time than those who had not.

Most primary school age children use apps and games that have an age restriction of 13 years old. Chassiakos et al (2016)

Article 17/article 17 (access to information from the media) Every child has the right to reliable information from a variety of sources, and governments should encourage the media to provide information that children can understand. Governments must help protect children from materials that could harm them.
Unicef (1992)

Websites, speakers and books.

Heitner, D. (2019). *Family online safety institute*. Available at:
<https://www.fosi.org/people/devorah-heitner>.

<https://www.bing.com/search?q=digital+childhood&FORM=AWRE>

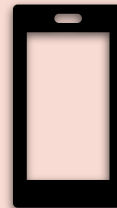
Goldilocks by Jeanne Willis & Tony Ross. Once upon a time online by David Bedford & Rosie Reeve.

<http://www.askaboutgames.com/advice/video-game-guides/>

Department of Education (DOE) (2002)' Safeguarding'.
<https://www.legislation.gov.uk/ukpga/2002/32/section/175> (Accessed: 28th February 2019).

Devorah Heitner is the founder and director of Raising Digital Natives, a source for parents and schools looking for guidance on how help children flourish in a digital world.

<https://www.youtube.com/watch?v=eRQdAOrqvGg> Heitner (2014).



Exploring social media, sharing the likes. Online bullying, (cyber bullying), image concerns. Social media stalking can reinforce isolation for the socially unconfident

Digital childhood, 2017

Caution is needed and privacy settings are required to safeguard children from strangers who can connect if no restrictions are in place. Cenyon (2016).

Always ask permission before you take or send a photo. That means parents too!

Digital childhood (2017)

Children receiving a smartphone for the first time should be taught how to use age-appropriate settings and safety features.

Digital childhood (2017)

Most families have a game console and it is a wonderful way to spend some time with the children, making it inclusive. Chassiakos et al (2016)

References

Aubrey, C. and Dahl, S. (2014) 'The confidence and competence in information and communication technologies of practitioners, parents and young children in the Early Years Foundation Stage, 'Early Years: *An International Research Journal*, 34:1, pp. 94-108. [On-line]. Available at:

<http://www.tandfonline.com/doi/pdf/10.1080/09575146.2013.792789> [Accessed: 27th February 2019].

Ask about games <http://www.askaboutgames.com/advice/video-game-guides/> [Accessed 1st March 2019].

Bedford,D.(2016). *Once upon a time online*.Uk:Parrogon Books.

Berson, I.R. and Berson, M.J. (2010) *High-tech Tots: Childhood in a digital World Research in Global Advocacy*. UK: Open University Press.

Borland, S.(2011)' Playing computer games increases obesity risk in teens by making them hungry' <https://www.dailymail.co.uk/health/article-1389096/Playing-games-encourages-obesity-teens-making-hungry.html> [Accessed :1st March 2019].

Burke, A. and Marsh, J. (2013) *Children's virtual play worlds: Culture, Learning, and Participation (New Literacies and Digital Epistemologies)*. Peter Lang Publishing Ltd

Cenzon,M.(2016) 'Ten positive effects of video games'.*Symptomfind*
<https://www.symptomfind.com/health/positive-effects-of-video-games/> [Accessed: 1st March 2019].

Cocozza, P (2014) 'Are iPads and tablets bad for young children? 'The *Guardian*.
<https://www.theguardian.com/society/2014/jan/08/are-tablet-computers-bad-young-children> [Accessed 27th February].

Chassiakos,Y.Radesky,J.Christakis,D.Moreno,M.Cross,C. (2016)' Children and Adolescents and digital media, '*American academy of Paediatrics*,Volume138,Issue5,pp.2-7
<http://pediatrics.aappublications.org/content/pediatrics/138/5/e20162593.full.pdf>
[Accessed 11th February 2019].

Children's commissioner, (2017). ' Making the case for a new UN framework for children's digital rights'
<https://www.childrenscommissioner.gov.uk/2017/06/28/making-the-case-for-a-new-un-framework-for-childrens-digital-rights/> [Accessed: 28th February 2019].

Christopher,D.(2018) 'The negative effects of game addiction'
<https://www.livestrong.com/article/278074-negative-effects-of-video-game-addiction/>
[Accessed :1st March2019].

de Block, L. and Buckingham D. (2010) *Global children, global media and childhood: migration, media and childhood*. Hampshire: Palgrave Macmillan.

Department of Education (DOE) (2002)' Safeguarding'.

<https://www.legislation.gov.uk/ukpga/2002/32/section/175> [Accessed: 28th February 2019].

Department of Education (DOE) (2019). Disadvantaged families to benefit from free early learning apps <https://www.gov.uk/government/news/disadvantaged-families-to-benefit-from-free-early-learning-apps> [Accessed: 28th February 2019].

Department for Children, Education, Lifelong Learning and Skills (2008) *Skills framework for 3 to 19-year-olds in Wales*. Cardiff: Welsh Assembly Government.

Digital childhood(2017)' Addressing Childhood Development Milestones in the Digital Environment ' <https://www.bing.com/search?q=digital+childhood&FORM=AWRE> [Accessed :1st March 2019].

Digital Competence framework (DCF) guidance (2018) *Education Wales*. Cardiff: Welsh Assembly. Available at: <https://learning.gov.wales/resources/browse-all/digital-competence-framework/?lang=en> [Accessed: 25th February 2019].

Dormehl, L. (2015)' Psychologist: Giving your kid an iPad is 'child abuse'. Cult of Mac. <https://www.cultofmac.com/389895/psychologist-giving-your-kid-an-ipad-is-child-abuse/> [Accessed: 27th February 2019].

Donaldson, G. (2015) *Successful Futures*. Independent Review of Curriculum and Assessment Arrangements in Wales. Available at: <https://www.bing.com/search?q=Successful+Futures%3A+Independent+Review+of+>

[Curriculum+and+Assessment+Arrangements+in+Wales+by+Professor%C2%A0Graham%C2%A0Donaldson+CB+\(2015\)&form=MSERBM&pc=EUPP_MSERT1](#)

[Accessed :25th February 2019]

Donohue, C. (2014) Technology and digital media in the early years: Tools for teaching and learning. London: Routledge
 Kaye, L. (2016) *Young children in a digital age: Teaching and learning with technology in the early years*. London: Routledge.

Edwards, S. (2013) By-passing the debate: Beyond the technology question in the early years. Available at: [//tactic.org.uk/pdfs/Relection-Edwards.pdf](http://tactic.org.uk/pdfs/Relection-Edwards.pdf) [Accessed 16th February 2019].

Estyn. (2016) www.estyn.gov.wales/document/supplementary-guidance-skills [Accessed 28th February 2019].

Flewitt, R., Messer, D., Kucirkova, N (2015). New Directions for early literacy in a digital age: The iPad. *Journal of Early Childhood Literacy*, 15(3) pp:202-209.

Foundation Phase Framework (2015) *Curriculum for Wales*: Cardiff: Welsh Assembly Government Available at: <https://beta.gov.wales/foundation-phase-framework> [Accessed 25th February 2019].

Friedman, R. A. Dr (2018) 'The Big Myth About Teenage Anxiety'. *New York Times*. <https://www.nytimes.com/2018/09/07/opinion/sunday/teenager-anxiety-phones-social-media.html> [Accessed :1st March 2019].

Hart, R. (1992). UNICEF International children's Development Centre, 'Children's Participation'. Available at : https://www.unicef-irc.org/publications/pdf/childrens_participation.pdf [Accessed :27th February 2019].

Heider, K. L. and Jalongo, M. R. (2014) *Young children and families in the information age: Applications of in early childhood*. London: Springer.

Heitner, D. (2019). *Family online safety institute*. Available at: <https://www.fosi.org/people/devorah-heitner-1/> [Accessed 26th February 2019].

Heitner, D. (2014). 'Digital Parenting'. Available at: <https://www.fosi.org/good-digital-parenting/navigating-social-media-your-children/> [Accessed :26th February 2019].

Heitner, D. (2014) *The Challenges of Raising a Digital Native*. YouTube. [On-line]. Available from: <https://www.youtube.com/watch?v=eRQdAOrqvGg> [Accessed: 26th February 2019].

Laidlaw, L. and O'Mara, J. (2011). 'Living in the iworld two literacy researchers reflect on the changing texts and literacy practices of childhood'. *English Teaching Practice and Critique*, 10, 4, pp.149-159.

Livingstone, S. (2017) <https://blogs.lse.ac.uk/mediapolicyproject/2017/01/19/an-updated-uncrc-for-the-digital-age/> [Accessed ;28th February 2019].

McManis, L. D Gunnewig, S.B. (2012). ' Finding the education in the educational technology with early learners. *Young Children* ,67,3, pp.14-24.

National Literacy and Numeracy Framework (NLF) (2014) *Learning Wales*. Cardiff: Welsh Assembly Government.

Palmer, S. (2016). 'Why the iPad is a far bigger threat to our children than anyone realises: Ten years ago, psychologist SUE PALMER predicted the toxic effects of social media. Now she sees a worrying new danger' *Dailymail*, 28th January 2019:pp1.[On-line].Available at: <https://www.dailymail.co.uk/femail/article-3420064/Why-iPad-far-bigger-threat-children-realises-Ten-years-ago-psychologist-SUE-PALMER-predicted-toxic-effects-social-media-sees-worrying-new-danger.html> [Accessed: 28th February 2019].

Rinaldi, C. (2006) *In Dialogue with Reggio Emilia: Listening, Researching and Learning*. London: Routledge

Robertson, A. (2018)' The Big Myth About Teenage Anxiety and Video-Games'. <http://www.askaboutgames.com/in-the-news-the-big-myth-about-teenage-anxiety-and-video-games/> [Accessed: 1st March 2019].

Sigman, A. (2012). Time for a view on screen time. *Archives of Disease in Childhood*, 97(11), pp. 935.

Teaching Times (2019) <https://www.teachingtimes.com/kb/75/jerome-bruner.htm> [Accessed 26th February 2019].

Teaching times (2019). 'Games consoles benefit children's education'
<https://www.teachingtimes.com/articles/games-consoles-education.htm> [Accessed 1st March 2019].

Triggle, N. (February 2019) 'Screen time: Children advised not to use electronic devices at dinner' <https://www.bbc.co.uk/news/health-47150658> [Accessed: 11th February 2019].

Question more (2015) '97% of small children have used mobile device, most have their own – study'. <https://www.rt.com/usa/320541-young-children-mobile-devices/> [Accessed 27th february].

Waller, T. and Davis, G. (Eds) (2014) *An Introduction to Early Childhood*. London: Sage Publications Ltd.

Willis, J. (2019) *Goldilocks*. Uk: Anderson Press.

Wersm (2018) 'Vodafone Teams Up With Goldilocks To Help Parents Educate Kids About IoT' <https://wersm.com/vodafone-teams-up-with-goldilocks-to-help-parents-educate-kids-about-iot/> [Accessed 27th February 2019].

Unicef (1992) *UNCRC Rights of the child* <https://www.unicef.org.uk/what-we-do/un-convention-child-rights/> [Accessed : 1st March 2019].

Van Son, R. (2011). 'The question is not whether, but how ICT can be useful in education' <http://edutechdebate.org/ict-in-schools/the-question-is-not-whether-buthow-ict-can-be-useful-in-education/> [Accessed: 25th February 2019].

