

Part one: Evaluate the effectiveness of digital devices used by young children to access media content/support ICT development.

Children are becoming more exposed to digital devices and have access to media more than ever before. The world of technology is rapidly changing and becoming the norm of everyday life. This paper will look at the effectiveness of digital devices used by young children, there will be consideration to both positive and negative aspects of allowing children to access media content.

Technology and media can be used in many different ways, Chassiakos et al (2016) demonstrates that the use of technology can offer early learning for children while helping them to develop new ideas and knowledge, before they begin school. Additionally, Learning Foundation (2020) demonstrates technology gives children a new experience to learning and allows them to develop effectively, this is because children can discover cultures in ways that could never be done before. They can learn about religious and political views which may not always be possible at home or even school. Technology prepares children for the future, they can remain productive and up to date. Technology can prepare them for school by giving them an advantage of learning at home before attending school.

Similarly, Internet matters.org (2020) explain that the use of technology allows children to be able to understand the world around them by using educational platforms that technology has to offer. Furthermore, they advise that technology gives children the freedom of self-developmental in their learning and allows them to be able to discover topics that interest them most which they may not study as much of during school. Furthermore, Earp (2017) advise that traditionally children can only learn from what is available to them and usually this is provided by parents, friends and school settings. However, the growing use of technology provides children a vast range of platforms to discover new things.

However, if technology is not used within boundaries it can become over used and can have serious consequences in children's lives and developmental. Brody (2015) and Hopkins at al (2013) highlight that children as young as one have access to digital devices before they access books. Sigman (2012) demonstrates that children under the age of 2 should not be exposed to any screen time including tv. Roberts (2019) explains that exposing children so young to technology can cause delays in their development skills such as language and sociability. If children are spending their time observing screen they will miss important opportunities to explore the world through their own eye and develop connections and relationships with people around them such as interactions with their family, friends and the world.

Kidron (2017) show that 'the digital environment was not intended as a place for childhood'. This is important especially amongst the youngest children who are exposed to screen time because the first four years of a child's life are the most important periods for developmental. If a child is being exposed to screen time too soon and too much of it, this will have a negative impact on the child's overall developmental. Furthermore, Kidron (2017) highlights that if technology habits are introduced at an early age, this will have an impact have an impact on their journey to adulthood due to the impact it has on their early years development. Vygotsky (1978) believes that the fundamental role of social interaction is vital in children's developmental because children learn through social interaction which then translates into the individuals mental structure. Therefore, if children are being exposed to

social content at a young child and missing out that social interaction, it is going to have an effect on their development.

Ryan (2018) suggests that technology allows for children to be creative, technology allows for their ideas to expand more than ever before. Technology allows for new skills to develop that may not be possible without access to Technology, it allows children to have develop digital competence which is vital for their future because today's society relies on technology, operates around technology and looks for individuals who are skilled around technology. Douglas, (2014) explains that many teachers believe that technology can be very beneficial to children in areas of learning such as in literacy. However, he explains that teachers face barriers such as getting access to software for children. The Wi-Fi within schools is poor which has an effect on delivering effective digital lessons. Alongside this, teacher training is inconsistent amongst technology teaching. Schools have budgets and generally digital teaching is not within the propriety list of their budgets.

In addition to Donaldson's report (2015) states the importance of children developing their digital skills because being in a modern society there is high demand of digitally skilled individuals. Therefore, it is important that digital competence is introduced into schools to prepare children for their future. Donaldson's report (2015) also states that the current curriculum framework is out of date in relation to technology, software and digital skills. Successful futures framework works to improve that and ensure that digital competence is delivered to children consistently and through cross curricular learning. Piaget discovered that children think and reason differently at different periods of their lives, (Brainerd, 1978). In contrast Chassiakos et al (2016) explains that the use of technology with young children is dependent on the age and developmental stage of the child, technology isn't going to be beneficial for all children of the same age. This aspect is important for teachers to consider when they implement digital education to the children that they teach, so they can meet the needs of each individual child. This also translates into the importance of teachers being able to have consistent training and be up to date with digital competence.

Kidron (2017) expressed 'the importance of every child having the right to access the digital world'. This is important because technology shouldn't be disadvantage to anyone. Children with additional learning needs can benefit from the use of technology in many ways. Diskusar (2018) states that special technology allows for children with additional learning needs be able to develop and have more independence in their learning and allows for them to have space from constant need of direct teacher involvement. Furthermore, technology can help children with disabilities to overcome barriers such as communication and speech problems. Similarly, Becta (2003) also believes that technology can help children overcome barriers and allows for tasks to be tailored to their suited individual skills and abilities. One example of developmental benefit of technology is that if a child struggles with writing or reading from a book they can have a tablet to type and for text to be enlarged for them. Welsh Government (2018) highlights that the digital competence framework is designed for all children in Wales, regardless of ability or learning needs. For children with additional learning needs the framework will be incorporated to suit every individual learner, along with their needs and abilities.

Livingstone (2018) expresses that Children's hand to eye coordination improves when they are using technology, they improve their eye tracking skills because they are following screens and what it is showing. This then would translate into better reading skills because children are always reading when using technology, sometimes more than books.

Furthermore, Livingstone (2018) explains this can translate to better language skills because their reading is improving, they may learn more words.

However, Odiaga (2017) shows that technology promotes a sedentary lifestyle which is having an impact on children's health. Children are spending more time indoors and not taking part in many physical activities meaning that they are gaining weight and becoming obese. There are more children obese in this day and age due to the rise in use of technology. Not only are children becoming more over weight but this would affect them later in life, with higher risk of developing under lining health conditions such as heart disease and type two diabetes. United Nations International Children's Education Fund (Unicef) (2017) explained that they found reducing screen time for children does not always mean that children will then take part in more physical activity. There are children who are inactive generally which is why we see links between screen time and overweight children. Unicef (2017) advice that there may not be links between screen time and children becoming overweight however, screen time should still be used within moderation and children should be encouraged to take part in physical activities.

Technology can cause in person social disconnections if children are using technology without a balance. This could lead to problems such as social skills, lack of ability to build relationships and conversations in person. However, Unicef (2017) found that children's social relationships were advanced by technology because it enhanced their existing relationships with friends and family as children are able to stay connected with them. Play Wales (2017) highlights that relying on technology can have an effect on children's imagination. Imagine play is vital in children's development because it encourages children to test their limits in their knowledge, physical abilities and helps with their confidence. Imaginative play allows children to problem solve and become resilient to challenges, it enables children to learn more about themselves and the world around them. It allows children to connect with their emotions, express how they are feeling and learn about emotions. However, technology takes away the wide range of imaginative play because it shows children imagery environments rather than encouraging children to use their own imagination. If children are lacking imaginative play and creativity this will have an impact on the world around the child, they will stop engaging in real life which can cause implications such as anxiety, behavioural problems and even sensory processing disorders.

Children having access to technology and the media exposes them to risk of cyber-attacks and other threats such as cyber bullying or offensive content Open access government (2019). Although parents can limit what their children have access to, there are still risks that children could be exposed to these risks. Parents may think that their children are safer indoors, where they can keep an eye on their children however, cyber bullying can happen on different platforms such as gaming, social media and children may not always talk to their parents about these issues, if they experience them UK safer internet Centre (2020). Furthermore, there are higher risks that children may be exposed while having access to technology such as inappropriate contact from strangers or even people the children may know.

Part two: An information leaflet for parents/careers of young children outlining issues relating to supporting and safeguarding children when accessing digital media/ICT.

Staying safe online – A guide for parents/carers.

Introduction – The online world is growing and children are starting to use digital devices and the internet more. This guide is designed to raise awareness of online risks, concerns parents or carers may have but also how to manage and minimise those risks or concerns and allow children to use digital devices safely.

Understanding the risk of online – The NSPCC (2020) demonstrate that there are risk of children having access to digital devices and being online. Children may come across harmful content which may scare or upset children. They may have access to social media when they have not reached the legal age and this could cause concerns for parents or carers. Furthermore, Ofcom, (2020) explain that children may give out too much personal information to online accounts and not understand the risks. Although there are risks to children having access to digital devices and being online there are many ways in which we can minimise the risks and children can have access safely.

**Balancing
screen
time**



**Parental
Control**



Internetmatters.org(no date) highlight that it is important to have a balance when providing screen time to children. Screen time can be beneficial by enabling children to be creative and learn about the digital world we live in. However, if a balance is not set then it can cause displace of family and homework time. Similarly, Health essential (2019) demonstrates the importance of face to face interactions because it enables children to learn how to interact, develop social skills, knowledge about their environment and world they live in. Internetmatters.org (no date) suggest that setting boundaries for screen time will enable parents/carers to have control and allow them to in cooperate physical activities so children learn and understand the importance of having a balance. Furthermore, they discuss this includes the parents/carers setting an example by their own screen time. Additionally, Rosen, (2018) explains that the way children spend their time away from digital devices is important because children tend to learn best through real life experiences and if a balance is not provided then younger children may not have an understanding of what is real life and what is fake as explained by internetmatters.org (no date). Rosen, (2018) and UK safe internet centre (2018) state the importance of experiencing screen time together for example skypeing family and friends to keep in touch, watching tv together. This allows for the parents to keep a balance of the amount of screen time being available to children.

Parental control is a system designed for parents/carers to use and be able to control what children have access to online as explained by Internetmatters.org (2020), who have also provided a step by step guide for parents and carers to learn how to operate parental control. The link to the guide follow: <https://www.internetmatters.org/parental-controls/> The NSPCC (2020) explain that it is important for parents/carers not to primarily rely on the safety nets and should teach children to always be aware and always speak to a trust adult if they have any concerns.

UK safer internet centre (2020) explain that cyber bullying is a form of bullying that happens online through social media, gaming or instant messaging platforms. This form of bullying can happen 24/7. However there are things that you can do to help prevent this. UK safer internet centre (2020) highlight that you should consider the age you allow your child o social media, the minimum age on most networks is 13. If your child does not meet the age guidelines maybe reconsider allowing them on social media. Bouckley (2019) highlights to talk to your children about the apps they are using and who they are sharing wit. Ensure your children know they can talk to you if they someone is ever unpleasant to them. Similarly, Kevorkian (no date) also highlight the importance of talking to your children and being able to act on any suspicions should you think they are being bullied but not say anything. Kevorkian (no date) also demonstrates the importance of helping your child to learn how to make decisions about technology.

It Is important that when children are going online they are searching safely. You can set up safe search engines for children such as <https://swiggle.org.uk> or <https://kidssearch.com> . Settings can also be activated on google and other search engines such as YouTube and game consoles. Safe search kids (no date) advises not to allow children to search the internet by themselves even through safe search engines. You should always supervise children while they are using technology.

**Cyber-
bullying**



**Search
Safely**



Part three: Plan an activity to promote the digital literacy and the competence of a group of young children when accessing ICT.

Activity Plan		
Activity: School surrounding hunt.		
Number of children: 24	Age of children: 5-6 years old	Number of adults: 4
Location: School setting- for example: the playground, the garden area.	Preparation time: 20 minutes	Activity time: 2 hours
Resources: iPad – There will be 12 iPad's to provide to the children, each group of 6 children will have 2 iPad to share. Suitable clothing – Sun hats & sun cream for the warm weather, coats and wellies for cold/wet weather.		
Aim/s of activity: • To build digital and ICT skills for children • To in cooperate cross curriculum learning • To provide children with first hand learning opportunities • To allow the children to lead in their learning		
Links to outcomes: Building digital competence for children so they can become confident and knowledgeable around the use of technology (Digital competence framework 2018). Cross-curricular learning within digital competency alongside literacy and numeracy (Donaldson's report 2015) .		
Differentiation: The activity will differentiation, the more abled children will be challenged to use their own initiative to explore the activity and have more independence using the pad's. Children who need more support and guidance will receive the support they need, expectations of the activity would be simplified for the children and explained in a manor they would understand better. If the children are still struggling then additional support would be provided by staff.		
Role of adult/adults: The role of the adult during this activity is to obverse the children and the environment in which they are working in, providing help and guidance when the children require it. The adults must make the children clear of their role, if the children require help or have a question they know who to go to. The adult should allow the children to lead the activity rather than it being an adult lead activity.		
The activity: Step one: Prepare the children to go outdoors in the appropriate clothing Step two: The activity will be based in the surrounding areas of the school. Step three: The children will be going on a hunt to see what they can discover. Step four: The children will be split into groups of six children and one adult.		

Step five: During the hunt the children will have access to iPads, the purpose of using iPads is to take photos of what they come across during their hunt that might interest the children or the children would like to understand more about. It could be something they know or something they have never seen before, the choose is up to them.

Step six: The children will save the pictures they take along their hunt, we will discover further during class.

Part four: Evaluate the planned activity making specific links to digital competence framework strands, curriculum requirements and to research based sources.

The activity was designed for children to use technology so they can develop their digital skills. During this section a review of the activity will be conducted, there were set aims allocated to the activity.

The first aim allocated to the activity was for children to be able to build their digital and ICT skills from the activity.

The digital competence framework (2008) highlights framework strands that children should meet at some point in their development, during the activity the children showed that they were able to use the ipads to take photos and videos of what they discovered on their walk around the school. Almost all children had no difficulty being able to use the devices for the set task.

During the activity children were able to communicate with one and another about what they were doing and if they were not sure of anything they would come to an adult who was on hand to help. The digital competence framework (2008) demonstrates that one strand children would need to meet is interacting and collaborating. The children were able to interact well within their groups. Topcui (2015) explain that Vygotsky's theory of social interaction plays a fundamental role in the development of cognitions for children. The process of social interaction is supported by families, peers and wider society. In this activity children's social interaction was supported by their teachers and peers. Furthermore, Topcui (2015) states that children learn about their world through physical interaction. This is important because the use of technology tends to be seen in a negative light, for example using technology means that children are spending less time being active and not spending time outside. However, during this activity the children were able to use technology while being physical and being outdoors. In addition to this, Donaldson's report (2015) demonstrate that they want to ensure that children become healthy, confident individuals and ensure they are skilled within digital competence for their future. The activity conducted by the children allowed them to be physical, while developing their digital skills.

Donaldson's report (2015) highlights the importance of a cross curricular education and that is where the incorporation of an activity outdoors and then developed further indoors came from. Children having access to the outdoor environment is very important for their overall development. Higgins (no date) advises that the environment a child is in has an immediate effect on the quality of their learning and development and that is why there must be a balance between the use of outdoor learning and indoor learning. Furthermore, children can gain many benefits from outdoor learning such as having the ability to move around without many restrictions, having a sense of space, being able to hear different noises and their physical activity is enhanced. Additionally, Welsh Government (2008) advice that physical activity is principal in their development for example children are able to learn body control and coordination of large movements, fine manipulative skills, spatial awareness and balance. These developments are not aspects that can be reached to a high standard within a closed indoor environment. Tovey (2016) states that Frobel's theory of outdoor activity and play showed that being outdoors allows children to develop an understanding of the natural world, appreciating the beauty and learning how to take care of it. Read (2015) states that outdoor activity enables children to have first-hand experience of the outdoors which is essential for their development and growing minds. Furthermore, the outdoors allows for

open ended activity, creativity and exploration which can sometimes be limited within an indoor environment.

Second aim for the activity was to allow children to lead in their learning, meaning arranging a child-led activity. At the start of the activity the children were given a set of instructions to guide them to their activity however, after the set of instruction they were free to explore and use the iPad as they pleased. The role of the adult within the activity was to observe and give a helping hand if required to the children. Znomski (2017) explains that allowing children to experience child-led learning allows them to develop decision making skills furthermore, it allows children to gain a sense of purpose and can feel as though they have direct control over their environment and what they do. In contrast Znomski (2017) that this would then build children self-confidence and self-ability. Similarly, Welsh government (2008) explain that as practitioners we must encourage and allow for child-led learning as it is vital for their developmental, such as support in early developmental. Allowing children to lead in their learning to in time create knowledgeable and creative individual because as they learn, they discover aspects such as problem solving, relating to others and the world around them.

Another strand the children were able to meet was storing and sharing, they were knowledgeable about how images are saved on an iPad and were able to delete any images they did not like which they had taken. Once in the class room the children had some assistance to upload the images to a larger screen for all the children to be able to see and explore the images that each group took. Furthermore, the children were able to undertake problem solving and modelling within the activity. Some children were more knowledgeable than the other around technology however, they worked together to use the devices effectively.

Within the children who took part in the activity there were not children with any physical disabilities, therefore the activity did not require to be adapted in relation to any physical abilities. However, if there was a child within the class room with a physical disability then adaption would have been put in place to ensure the child could participate for example if a child had a mobility issue then the route chosen to complete the hunt would have been one that is wheelchair accessible. Children who find the activity more difficult than others or struggle to understand the instructions of the activity would receive additional support from the teachers. Welsh government (2008) illustrate that practitioners must support/scaffold children's learning when they are struggling, once the child is able to conduct the work assigned, the practitioner can reduce to support provided to them.

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