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Criteria One

When evaluating the effectiveness of digital devices used by young children to access media content/support ICT development there are both positive and negative views on how they effect and educate children. Welsh Government (2016) explain it is extremely beneficial for technology to be used by children as it enhances their development. Welsh Government (2016) explain that the digital competence framework (DCF) enhances children's educational knowledge when they state it empowers a set of skills knowledge and attitudes which enables the critical use of technology, promoting creativity and confidence and is a holistic form of learning.

Welsh Government (2016) believe that digital competence is essential for learners as it enables them to be informed, capable and be able to function in current society. Wiseman and Taylor (2015:100) synthesis with this as they state that many children now have access to a wide range of digital technology such as computers, consoles, tablets, televisions, DVDs and smart phones, which provide a multi-modal form of interactive literacy to some extent which the usual print media cannot do. Wiseman and Taylor (2015:100) explain this is a fresh new form of literacy which integrates media and technology which is referred to as New Media Literacies (NMLs) or digital literacies. However, Ofcom (2019:1) have a more negative view on digital competence as they express that parents now feel that the negatives outweigh the benefits regarding their children using online technology compared to just five years ago in 2015. However, there is research showing that 85% of parents are now discussing online safety with their children compared to 81% in 2018 which is a positive sign as they are therefore able to guide their children into being safe online.

Digital devices

Donaldson (2015) explains that the development of digital competence is effective as it enhances children's chances of finding employment in our future. 7 Cool Gadgets For Kids & Smart Toys 2018 You Must Have (2018) synthesize with Donaldson (2015) as we can see from watching some benefits from the new digital gadgets for children from birth such as cognitive development through

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activities on tablets such as memory games, linguistic development through some devices which repeat the alphabet for example, literacy and numeracy skills as children can now play education games on these devices now and physical wellbeing from some forms of technology which can sink with the motions with you completing different form of sport through it. However, the effectiveness of digital devices varies as to what form the child is exposed to as Gerbner and Gross (1976) explain that children are influenced by what they watch, in today's day the form of Television, mobile phones, tablets and computer games are widely accessible and used by children.

Ofcom's 'Children and Parents Media Use and Attitudes Report' (2019) from January 2019 found evidence to show that '1% of 3-4-year old's have their own mobile devices and 19% have their own iPad, 52% of 3-4-year old's go online for an average of nearly 9 hours a week 45% of 3-4-year old's use YouTube'. Linking this back to Gerbner and Gross (1976) If children are influenced strongly from these forms of technology and are then accessing violent video games, aggressive films with inappropriate language for an average of 9 hours per week, this will have a harmful effect on them. Gerbner and Gross (1976) explain that children who watch violence often view the world to be mean and harmful, this is also known as 'Mean World Syndrome'.

Yes, digital devices and media have an influence on children however, as we can see this is not always negative and is subject to what the child is viewing. This comes down to the parent/guardian/practitioner or any adult with an influence on that child on what they allow the child to view, this then can either positively affect the child or can negatively affect the child.

Importance of parents and practitioners

There is an important role parents/practitioner play in guiding the child to use effective forms on technology, helping them to recognise the value of the use of technology (GOV.UK, 2019). GOV.UK (2019) emphasis the importance of parent's and practitioners educating children on the foundations of being safe

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online. However, this can depend on the type of devices the child is using and what form of media they are accessing as Dohnt and Tiggerman (2006) inform us that girls now as young as six years old are negatively affected by media as they are now aware of their body image, wanting to diet and become thinner.

Some effects of media such as the body image example may be difficult for an adult to control as in today's day, this is seen everywhere, from television interrupted adverts to being disguised or portrayed in films without knowing, it can take even only one child on the playground to be subject to a form of negative body image media to then pass that negative affect onto the next child and so forth (Playground one, 2020). This shows that although parents practitioners can monitor and prevent children from accessing unhealthy and harmful forms of technology there are however some aspects that may seem inevitable currently and for the future (NSPCC, 2018).

However, those aspects which can be monitored should be as Stephen and Plowman (2014) investigated themselves to see if the effects digital devices had on child and found that those who interacted with their child and supported their child on a device had a positive effect on the child's social development. We can see the effects of digital media and the use of ICT with children accessing it, there is clear harm that this can bring to a child with Gerbner and Gross et al (1980).

Someone who would agree that digital media and the use of ICT can have a negative effect on children is Tanya Bryon who was asked in 2008 by the government to produce a report on child safety online and the changes that needed to be made (NSPCC, 2018). NSPCC (2018) 10 years later review the Bryon report and explain that 53% of Bryons recommendation for child safety online were either partially or totally ignored.

NSPCC (2018) state The Department for Digital, Culture, Media and Sport's forthcoming Internet Safety Strategy will be bringing forward a code for online safety, however this is voluntary, and this does not even include anti grooming

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measures to protect children. However, There are many benefits of children using digital devices and accessing media content and for supporting the ICT development as we can see there are communication skills, language and literacy development through the use (Welsh Government, 2018).

Language and literacy skills

Technology has a positive effect on children's language and literacy skills according to Billington (2016) as it offers interactive and intuitive forms of storytelling through devices, educational apps for children of all ages where children can learning different languages, this is beneficial if a parent wants their child to learn a language however they do not have knowledge on it, therefore it removes that barrier that was initially there (Billington, 2016). However, technology should not be replaced from human interaction but used as an extra tool to enhance the child's development (Formby, 2014) A child still needs to interact with others as Vygotsky (1978) explains in his sociocultural theory that children need to socialise with parents and care givers in order to develop behaviours and cognitive skills which are recognised amongst their own society and ways of life.

Cognitive development and social skills

As we know children can retain information given to them repetitively and the earlier the easier it is for them to store, most cognitive skills are development before the child reaches school Van Deventer and Van Rensburg et al (2011). Piaget (1952) explains this with his cognitive development theory with the first being sensorimotor stage with children from birth to two years old, where the child is introduced to a toy animal, if the child is only introduced to it once it would have become nothing other than a mixture of senses to the child. However, by allowing the child to revisit, the child then can gather more information and store this information and will eventually know it for being a toy animal Piaget (1952).

Whilst there is varied evidence on the effectiveness of digital devices used by young children to access media content/support ICT development, Study.com (2020)

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emphasises the effectiveness explain that in fact they do help a child's cognitive development as children can access educational apps which stimulate the mind such as they can learn to recognise images, identify letters and numbers and develop their language skills.

Acuna (2014) Also states how digital devices can be effective for educating children as when they use these with other peers or friends to draw, create pictures, take photographs or play games it enhances their social skills and helps them to communicate their feelings and ideas. However, again this depends on the type of game or app the child is accessing as to how educational and beneficial it is to their social skills. However, we can see the importance of developing correct social skills through bandura (1961) social learning theory where it states social learning helps children's memory, attention and motivation which then helps their cognitive and behavioural development. DCSF (2008) also state the same benefits. However, this is not always the case for every child as some children may find it difficult to learn socially for example children with autism (NHS, 2019).

Children with ALN and SEN

When discussing the effectiveness of digital devices used by young children to access media content and support ICT development it is important to think of those who may have Additional Learning Needs (ALN) or Special Educational Needs (SEN). It has been found that children with ALN are more likely to get cyberbullied (GOV.UK, 2019). Therefore, this is a setback in the effectiveness of digital devices for young children.

Children can be made fun of through social media by other children or even taken advantage of, for instance, convinced into sending money to others (Anti-Bullying Alliance, No Date). However, Digital devices and the use of media can be effective to those who may have a disability as it can be a way to hide a disability sometimes and can help them to feel as though the world cannot see it therefore no one can judge them from their disability or disorder (Stanberry and Raskind, 2009).

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Stanberry and Raskind (2009) also show how the use of digital devices can be useful to children with (ALN or (SEN) as if they struggle to read but have listening abilities then due to the development on digital devices they can now access audio books and listen to stories. Walker and Logan (2009) would synthesize with this as they say it promotes inclusiveness when learning.

Walker and Logan (2009) inform us on a school in Birmingham who use digital devices such as normal video game consoles in order to aid children who have hearing impairments, they had a sense of independence when using the games and were even able to create class videos using British sign language, this shows an effective way in which digital devices can be used and provide holistic development. However, this is down to the practitioner to assess individuals in order to plan different ways they can access technology to help their development (National Curriculum Statutory Inclusion Statement, DCSF 2000).

Conclusion

Therefore, after evaluating the effectiveness of digital devices used by young children to access media content and support ICT development we can see there is evidence to prove that digital devices are effective for young children for their cognitive development as we seen from Study.com (2020) that educational apps can stimulate the mind as they can help a child to recognise images, identify letters and numbers and develop their language skills. We can see digital devices are effective in developing children's language and communication skills as Billington (2016) explains through interactive and intuitive forms of storytelling on devices it promotes their linguistic.

We know that there are strong ways in which the use of digital devices can enhance a child's development as Donaldson (2015) has stressed the importance in imbedding it within the curriculum as these skills are skills a child will need to take into adulthood and will then increase their chances of employment. However, digital devices as we have seen can also be ineffective for a child's development and to some extent can be a danger, we know this as Gerbner

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and Gross (1976) explain that children who watch violence often view the world to be mean and harmful also how it can be a danger to those who have ALN or SEN GOV.UK (2019) state they are at a higher risk of getting cyberbullied.

However, when looking at both the effectiveness and ineffectiveness we can see that children do need to be using digital devices but with support from parents and practitioners, with them guiding them in the educational way of using these devices and steering them away from the harmful areas of technology but also educating them of digital safety along the way (GOV, 2019).

Criteria Two

<u>Parents/Carers: Guidance on supporting and safeguarding children when accessing digital media/ICT.</u>  Importance of children accessing technology.  Study.com (2020) emphasises the importance of children accessing technology, they explain it helps cognitive development as children	A new UK law which is set to be released were social media and technology companies must now abide by with a mandatory duty of care for users. If they do not, they may face fines or block access to sites. This will tackle illegal and harmful activities. Further information can be gathered on this from: https://www.gov.uk/government/news/uk-to-introduce-world-first-online-safety-laws The new law gives extra support to The UNCRC with regards to Article 3 from The UNCRC which states ‘In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration’. E Safety Act 2008 is to protect and educate both children and practitioners in their use of technology and	Unicef (2020) it states Article 16, that a child has the right to a private life however it can depend if a child may be in danger or not. Unicef (2020) state it is the care givers responsibility to safeguard any child in their care. Ofsed (2013) inform us that it is important for schools and families to work together on developing strategies, looking at policies and discussing safety issues around technology involving the children. Training for parents/Carers  The NSPCC Learning (2020) offer a 4-hour training course to parents for £35 which will help you better understand reasons to protect your children and
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can access educational apps which stimulate the mind such as they can learn to recognise images, identify letters and numbers and develop their language skills.

With regards to school, Donaldson (2015) has also addressed Digital media as an important aspect of a child's development as it develops a child's holistically by developing their linguistic and numeracy skills, fine motor skills, hand eye coordination, cognitive development and ICT skills which all play a vital part in a child becoming employable in adulthood. Donaldson (2015) explains that it is important for parents to engage in educational technology with their children to further enhance the holistic development.

Cyber safety.



Open Colleges (no date) informs us that the internet is now one of the best resources we have for anyone to develop skills within our forever digital growing world, however it is also a one of the most dangers tools we have.

Kidscape (No Date) Inform us there are many forms of danger digital media can bring such as

- Exposure to pornographic or violent material
- Grooming and sexual abuse
- Cyberbullying
- Privacy and confidentiality neglected

Dangers of CSE.

have the power to intervene and support any incident where it may be needed. More information can be found at: <https://www.eani.org.uk/site/default/files/2018-10/OFSTED%20-%20Inspecting%20e-safety.pdf>

Importance of parents/carers



Unicef (2017) explain that firstly, we need to identify and close the gaps when it comes to accessing quality online resources to make online a safer place for our children. Unicef (2017) Explain there are gaps in our knowledge about what our children can access online, therefore it is important to address the risk and direct them into accessing positive opportunities to learn through technology.

Kids Health (2018) inform us there are several online safety tools that parents can access such as parental control options on devices where you can block adult content and block personal information from being shared.

However, it is important to keep in mind that children are digitally intelligent, and some may be able to disable these parental controls innocently for example to access games with a higher age rating than their age.

Plumb and Kautz (2015) explain that If you as the parent educate them and involve them, having an

educate you on how to access support and advice regarding online safety in the future. <https://learning.nspcc.org.uk/training/online-safety>

National Online Safety (2020) offer a free annual online course, this allows you to keep up to date with the constantly evolving technology world. They explain the importance of the need for parents to also be educated on digital media as children use of technology does not only happen within the school. This course educates you on Unsafe communications, Effects to mental health, wellbeing and lifestyle and Managing online information.

This course has 24 topics given expanding your knowledge on technology in many areas in order to safeguard your child. One topic for example is 'Targeted Adverts & Pop-Ups'. To access this course, go to: <https://nationalonlinesafety.com/courses/online-safety-course-for-parents-and-carers-2019-20-1>

Organisations and support groups.

Barnardo's Cymru (2020) are a charity who can help support and educate care givers the risks of online exploitation also supporting anyone who has suffered harm or have mental health issues from online harm. <https://www.barnardos.org.uk/online-safety>

Child exploitation and online protection command (CEOP) (2020) is the National Crime Agency which offer a

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Child Sexual Exploitation (CSE) is when someone takes advantage sexually of a young person, this is anyone under the age of 18 and is explained by NHS England (2017).

The Children's Society (2020) explain how any child can be targeted however abusers often target those they see vulnerable and do not have a good support system at home, this shows how important it is to discuss digital media with your children and support them.

For example, a message could come through explain they are looking to get someone to test their new clothing brand for free which would incite a child who is uneducated on online safety.

Policies and Legislations.



The UK Council for Child Internet Safety also known as UKCCIS which can be found online on GOV.UK (2019) explains they provide 'Products, platforms and services that are safer by default for all users' and they also care gives the tools and guidance to help detect online harms. They work to protect children online from hate crimes/speeches, cyberbullying or any other form of harm by collaboratively working with other platforms such as Google and Facebook to identify harms. This can all be found online at:

<https://www.gov.uk/government/organisations/uk-council-for-internet-safety/about>

open relationship around technology you can explain why these restrictions are put in place for their protection and explaining what dangers there are online.

Kids Health (2018) also explain how there are programmes that can track online activity so you can monitor what your children are doing and ensuring they are safe online.

GOV.UK (2019) express they understand this may be breaching privacy.

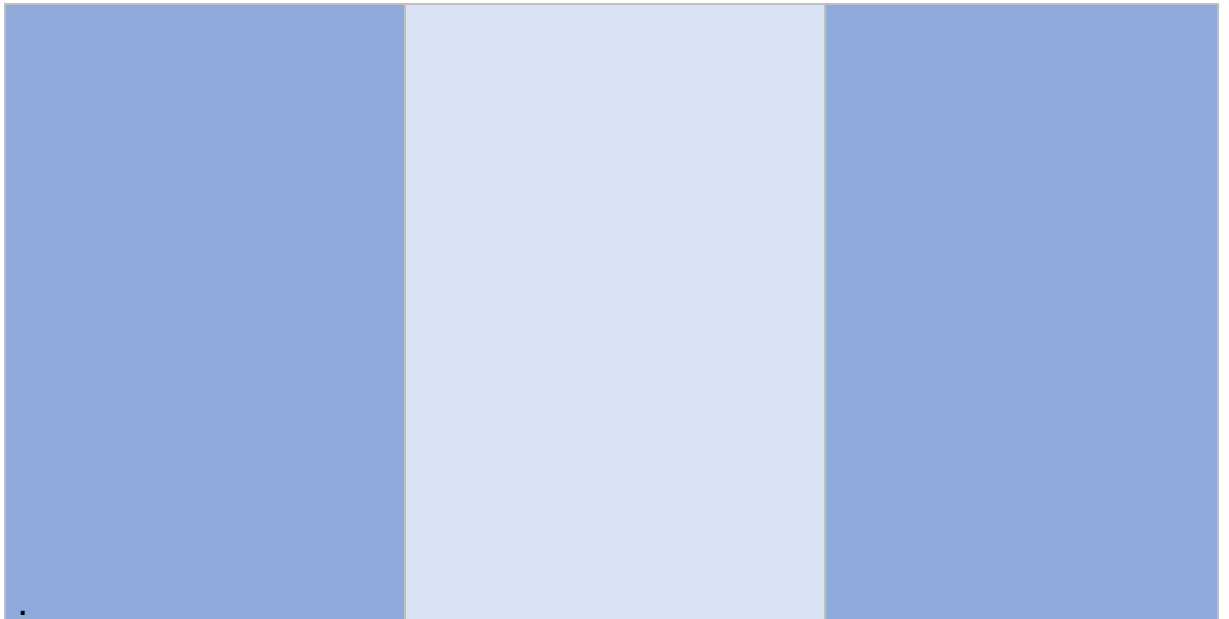
However, children can be unaware of the different forms of dangers online and may not know they have shared information to a fake site or may not realise they are being taken advantage of or even being groomed.

'Thinkuknow' education programme and tackle online sexual abuse.

<https://www.ceop.police.uk/safety-centre/>



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Criteria Three

Activity Plan		
Activity: Part 1. What shapes can you find around your town. Part 2. Create a pictogram on shape classification using the digital images their camera to show how many of the shape they seen.		
Number of children: Ten	Age of children: five - Six	Number of adults: Three

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Location: Part One: A planned route, 10-minute walk around the local town near the school. Part Two: School Classroom.	Preparation time: Fifteen minutes to get the school high visibility jackets, do a register and hand out school cameras to each child.	Activity time: Part One: One hour Part Two: One hour
Resources:	High visibility jackets Camera given one between two children. Part Two: One computer per child	
Aim/s of activity:	To build on the Childs digital media skills whilst educating them on road safety and their knowledge on shapes and their meanings linked to road safety.	
Links to outcomes:	Data and computational thinking - record data collected in a suitable format, e.g. use tally charts, pictograms	

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	and block graphs in a simple computing package (Welsh Government, 2020). • Interacting and collaborating - work together with a partner/partners on a piece of digital work (Welsh Government, 2020). • Data and computational thinking - classify objects using one criterion (Welsh Government, 2020).	
Differentiation:	• Children may have different experiences using digital technology, such as the use of it at home however considering the lack of use at home also.	

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	• Children may have different abilities such as those with ALN or SEN.	
Role of adult/adults:	• The practitioner's role will be to create the plan of what route they are taking. • The practitioner's role will be to ensure the safety of the child while walking through the town. • The practitioner will be there to guide the children, answering any questions they may have regarding the environment/shape s/road safety. • The practitioners will also be responsible for making sure every child knows how to work the digital	

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	camera and is taking pictures correctly along the way. Part 2 • Practitioners will be responsible for opening the correct document for each of the children to access Hwb and educating/ refreshing the children's memory on how to create a pictogram and explain what it is that is being asked of them to dousing pictogram. • The practitioner's role will be to ensure every child has some understanding of road signs/shapes and safety. • The practitioner's role will be to ensure the children	
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	have met the outcomes/ competencies from completing this activity.	
The activity:	For this activity a group of children will be participating in a walk around the local town. The children will be working in pairs and will have a digital camera between them which they will use to take photos of any shapes they may see along the walk, for example a window. The child may recognise this as the square and will be encouraged to take a photo of it using their digital camera. They may take photographs of road safety related signs, prompting road safety discussions. Along the way the children will be guided by the practitioner with ideas of objects to take photos of.	

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	The second part of the activity the children return to school using a computer each to access Hwb where they can create a pictogram where they use shape classification, document how many shapes they seen from looking back at their images and using their memory. They may discuss with their partner next to them.	
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Criteria Four

The current activity is an outdoor activity as ten children aged five to six are taken out of the school premises around the local town which promotes discovery and learning about the world around them which helps children to engage with the local community (Institute for Outdoor Learning 2020). The number of staff that are there is three. This is abiding by the adult child ratio guidelines (NSPCC, 2019).

The children each have a digital camera Promoting digital competence as the Donaldson report states that all teachers have a responsibility to support and develop digital competences and the skills and knowledge for children to do so (Donaldson, 2015), therefore this activity helps to promote digital competences. Not only does this promote digital competences, it always promotes learning on shapes, road signs and safety as the children are asked to take photographs of all the road/path signs they see discussing what shapes they are and what the shapes may

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symbolise. This will promote the children's understanding on road signs, road safety and shapes.

By doing this activity, it is a form of hands on learning which is beneficial for educating children, we know this as Piaget's (1969) theory of constructivism shows that children learn best through hands on experiences, it enhances logical and conceptual growth, through doing this activity and thinking about Piaget's (1969) theory, children will be learning about classifications and the meaning of road signs which will be their new knowledge, children will also be using their old knowledge of things they may have grouped before and information on road signs they may have learnt previously putting that together to form a strong new educational understanding. However, this may be difficult for some children with autism who may find it difficult to socialise (NHS 2019) therefore it is important the practitioner to make this inclusive and a suitable way for a child with an ALN to participate Ofsted (2004).

From the children capturing images of shapes and signs, they are using their old knowledge with their new knowledge which is developing their recognition (Brown and Campione 1972). From this task where the children need discuss shapes and road signs throughout the walk, they may pass a sign they have already seen and then having the ability to look through their images on the digital camera will enhance their ability to recall information which links to linguistic development (Simcock and Hayne 2003). However, some children may get distracted from passing people, cars and their curious minds might wonder off the task (Developmental Learning Centre, 2018).

To a degree it will be child led as the children will be taking digital images of anything they recognise as a shape, Bruner's (1966) theory of constructivist explains it is important for the child to discover by themselves with the practitioner there to help translate the information to educate the child. The practitioner will be there to guide the children throughout the task and initiating discussions on classification, shapes and road safety, with the understanding on the importance of the practitioner answering questions. We know this is important as Vygotsky (1978) explains

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children learn through the more knowledgeable other, however this is not always the practitioner and can be learning through peers.

The children are working in pairs during the first part of the activity sharing the digital camera, therefore this promotes social learning works on one of the outcomes from the digital competence framework which is interacting and collaborating - work together with a partner/partners on a piece of digital work (Welsh Government, 2020). As we now know, this is seen as a strong way of learning as Vygotsky (1978) states children learn through social interaction, through the more knowledgeable other. Like Vygotsky (1978), Bandura (1973) states that the best form of learning for a child is social learning as it strengthens the attention span, memory and the motivation of a child. Dera (2018) explain that the Digital Competence Framework focuses on developing these digital skills as they can apply to a range of subjects which then help the child get a career when they are older.

The practitioner's role is to create the plan of the route they will be taking to ensure the safety of the children. Planning needs to be done to ensure they are providing an educational activity as a whole and for each individual child and that the child is meeting progressing towards their learning goals (Early Years Foundation Stage Profile: Handbook, 2018). However, not every child may have the same knowledge on digital technology therefore it is important to look at the differentiations and adapting the activity to meet the unique child (Hall and Hughes et al, 2000).

It is important to adapt the activity to meet children who may have additional learning needs also known as (ALN) or special educational needs (SEN) so that it is inclusive improving the whole learning environment and the combination of teaching this approach should then prevent some children from needing to be identified as having special educational needs and being separated and feeling as though they are different from the rest (Davis, 2003). Within this task this could be supporting a child who has ALN with a one to one within the activity and during part two where they are to work on a computer. The use of pictograms have been proven to help children in education with moderate and severe intellectual disabilities as it is a nonverbal form of communication, a way of exchanging information, it is a type of technology that

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enables many with disabilities to feel just as able as their peers and a system that could advance the communication, development, activate educational forms and social integration of children with ALN or SEN (Dzerviniks, 2008).

The practitioner will need to ensure all children understand how to use the digital camera, otherwise the task will be ineffective in enhancing the children's digital skills which will then affect one of the aims of the activity (Welsh Government, 2018).

However, for this to work the practitioner must have an understanding themselves of the digital camera, therefore have some form of digital knowledge, this is important as Plumb and Kautz (2015) identify that a key barrier to enhancing children's knowledge of technology is the practitioners lack of digital technology skills.

During part two of the activity it is the responsibility of the practitioner to open the Hwb and correct document ready for the children to begin creating their pictogram. From part two where the children must create a pictogram on shape classification using their pictures gathered on the digital camera. This links to one of the digital competence outcomes which is Data and computational thinking - record data collected in a suitable format, e.g. use tally charts, pictograms and block graphs in a simple computing package (Welsh Government, 2020). This will refresh the child's memory, a form of repetition which we know is beneficial as Hull (1940) states if a child is repeating something it is likely to stay as habit increases strength. Someone who agrees with this is Hirschler (1994) as they state repetition helps children to retain information and having information stored onto a digital device to look back at will increase their knowledge retainment. However, it is important to ensure that the children all understand how to create a pictogram in order for the children to be able to complete this task effectively, therefore it is down to the practitioner to educate the children on creating pictograms prior to this task (National Literacy Trust, 2017).

During the activity it is the practitioner's responsibility to ensure that the children have individually met the aims of the digital competence framework from the Welsh Government (2018) which are set out in the activity plan.

Conclusion

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From hindsight, this activity strongly promotes the learning through digital competence framework from the Welsh Government (2020) as it has two elements of introducing technology to children, the first being the digital camera and the second being the use of the computer. Thirdly activity makes strong links to the three outcomes from the digital competence framework that it set out to follow (Welsh Government, 2020) as we can see the children are working in pairs with a form of digital technology which is a strong way of learning as we know Vygotsky (1978) stated children learn through social interaction, through the more knowledgeable other with Bandura (1973) synthesizing when he states that the best form of learning for a child is social learning as it strengthens the attention span, memory and the motivation of a child.

The children learnt how to create a pictogram using the computer where they use it to classify their images into shape classification using the images that they took on the digital camera, it has been proven that pictograms help children who have moderate and severe intellectual disabilities as it is a nonverbal form of communication (Dzerviniks, 2008). The activity also has an element of outdoors which helps children to engage with the local community (Institute for Outdoor Learning 2020).

However, there are ways in which it could be improved in order to fit the digital competence framework from Welsh Government (2020) for example there are not enough alternative ways show to support a child with ALN or SEN in education within this activity so they are at risk of potentially not obtaining knowledge and skills on digital competence. However, this activity does benefit children and promote their understanding on digital competences following the guidelines from Welsh Government (2020) whilst also showing holistic development for children throughout the activity.

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