

Media and Digital Literacy

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Section 1

This is a critical evaluation of the effectiveness of digital devices used by young children to access media content and support their Information and Communications Technology (ICT) development. With technology continuously evolving at an exponential rate (Hooper, 2015; Desjardins, 2018; Snook, 2020) the advantages and disadvantages of digital media within childhood are becoming more apparent to researchers. This evaluation will highlight both the negative and positive impact technology can have on a child's development.

Digital literacy involves the ability to access digital media in a range of contexts in order to raise capabilities in retrieving information, assessing, storing, presenting, producing and exchanging information. These are aspects of the digital literacy skills needed for to become digitally competent. Digital competences involve confident and critical use of ICT. Becoming digitally competent will allow an individual to learn, self develop, participate in society and provide them with more opportunities for future employment. In addition, digital competencies also consist of the ability to critically analyse the credibility of online sources and to understand the risks involved with accessing digital media and how to manage such risks (Ala-Mutka, Punie and Redecker, 2008; European Union, 2006). WJEC (2015) published four qualifications that are considered essential for successful employment and life, digital literacy skills are one of the four essential skills. Moreover, Welsh Government (2020) have already recognized how important digital competence is for opening opportunities for children's futures, which in return can also have a positive impact on the economy in Wales. Therefore, as part of the Welsh Governments 'Our National Mission' (2020) action plan for education, the Digital Competence Framework (DCF) has been adopted and embedded into Wales' national curriculum. Following the implementation of the DCF, the New Curriculum for Wales frameworks builds upon the importance of a digital competent generation with Professor Graham Donaldson comments:

"Full participation in modern society and the workplace already demands increasingly high levels of digital competence and that process can only continue into a future that we cannot imagine", (Estyn, 2019).

Through using implanting the DCF as a cross curricular framework children can enhance their technical skills which can contribute to all of the 'four purposes' of the Curriculum for Wales (2020).

However, despite governments aims to teach children how to become digitally competent; finding the right balance between the importance of children accessing digital media to enhance their skillset, whilst at the same time trying to protect their safety, Privacy, health and well being (Cultures of Dignity, 2019) proves to be the biggest challenge "for young people growing up in the UK today" reports Barnardo's (2017). There are numerous risks involved when children access digital media, which have been widely documented along with advice on how to limit these risks. Cyberbullying, online grooming, screen time and identity theft are just a few amongst a growing list of online safety issues (NSPCC, 2021; Internet Matters, 2021a). Department for Education (2021) notes how all schools are required to put in place strong measures to prevent children from experiencing online harm. Schools are required to provide appropriate filters and monitoring systems to obstruct children from accessing harmful content online. Schools should also put e-safety policies and procedures into practice in order to mitigate risks and to respond appropriately to any concerns that may arise. Even if these filters are put in place within schools, UK Council for Internet Safety, (2019) express how important it is to teach children how to become resilient and safeguard themselves from online harm. This can be implemented and interweaved through the DCF strands and also by participating in 'Internet Safety Days', which can inform staff, pupils and parents with up-to-date information of how to stay safe online (NSPCC, 2021). Internet safety lessons may provide children and parents with new information that they might have not previously known. This new information may give the child/parent the confidence to recognize if they have/are at risk of online harm and therefore disclose this information to the school. Schools can then act upon this information by following the schools safeguarding procedures to help protect the child/children from further risk (Department for Education, 2019).

Despite the risks of accessing digital media, there are many benefits to using technology within schools (Learning Foundation, 2021). Through the use of interactive whiteboards, tablets, computers, laptops and other devices children can build on their technology skills to enhance their learning. The use of these devices can have a

positive impact on raising engagement levels between children, staff and parents and through better engagement, curriculum goals can be achieved (Cremin and Arthur, 2014). Panworld Education (2017) expresses how technology enables children to become more independent within their learning. Through accessing a range of online content children are able to explore open ended questions with logic and reasoning, improving their critical thinking skills. Self-led online research can also allow children to go beyond their current understanding of a topic, which can deepen and extend their knowledge (Learning Foundation, 2021). Furthermore, Lev Vygotsky's theory of the 'more knowledgeable other' is considered to be the teacher or peer who possesses the most knowledge in a subject, with the more knowledgeable other scaffolding and guiding the learner through a learning process. When the main form of mediation is a digital device, it is that device that becomes the more knowledgeable other providing the user with a vast amount of new information in many different forms and contexts (Faddeev, 2019). With children growing up in a more digital generation, most already possess basic digital skills, this could allow for children to become the more knowledgeable other when it comes to helping adults understand different areas of digital media. Waterford (2020) notes how educators may be reluctant to introduce digital resources into their classrooms because of their own lack of confidence and understanding in how to use the digital resource effectively. This also highlights how important it is that educators make themselves familiar with a chosen digital resource before they introduce it to the students, in order for the resource to become beneficial and support the children's learning with the desired outcome. Furthermore, Garcia-Perez, Santos-Delgado and Buzon-Garcia (2016) notes how a number of international reports have highlighted how educators' own digital competencies is a key factor in educational innovation and improvements.

Access to digital media within schools can have a significant impact on children with Additional Learning Needs (ALN) as it can allow for equality. Alternative and Augmented Communication (AAC) is a communication system which is used by those with communication barriers. Children with many different conditions including autism spectrum disorder (ASD), hearing loss, neurological problems can benefit from using Low technology or high technology AAC aids, which allow a child to communicate more effectively with others and therefore improving their quality of life (Nook, 2020; SLT for kids, 2021). In addition, children with learning difficulties such as dyslexia may

benefit from the use of technology in class. Online programs such as 'Lexia' can support children both in schools and at home allowing access to a range of interactive reading sources. Introducing technology which offers different systems for learning can help facilitate a more inclusive classroom (LexiaUK, 2021; ZIOXI, 2021).

Rosso (2016) explains how technology within the classroom can become a distraction to pupils. If not managed properly, children may be too tempted to not stay on task and instead indulge in easily accessible games such as, 'Minecraft'. This could have a negative impact on their learning, if they are not meeting the lesson objectives and using the digital devices to complete educational tasks. Nevertheless, there are ways to manage this within the classroom. With Apple being a popular brand of digital devices purchased by schools, their devices come with many features which can aid classroom digital management. Apple iPads offer the app 'Apple Classroom, this tool can allow teachers to keep track of students progress and also oversee which app the children are using to ensure children are on task and using the appropriate app for the lesson states Keller and Sargent (2018). With safety measures put in place to monitor children's online activity and to protect them from harm in schools, it has been reported that parents find it more difficult to manage their child's online activities at home (Ofcom, 2019). Ofcom (2018), report that the most used digital devices used by children aged three to eleven at home are television sets, tablets, smartphones and gaming consoles. The rising numbers of children who own their own mobile devices such as mobile phones and tablets are allowing for children to have more unsupervised access online and therefore, potentially putting the child at greater risk of online safety issues notes UNICEF (2017). Government guidance and online sites such as NSPCC and Internet Matters offer parents guidance and support on how to deal with online safety risks along with advice on how to teach their children how to use the internet safely. Like schools, there are ways in which parents can help prevent online harm. By checking the content of their child's apps, checking the age limit of the content and by changing the privacy and security settings can help parents mitigate risks for their child in order for the children to access digital media in a more enjoyable and safe way (NSPCC, 2021).

Access to digital media at home has many benefits on a child's development such as connecting with friends online, developing their digital literacy skills, accessing a wide

range of information to expand their learning (Vander-Ark, 2015). However, it is important to find a healthy balance between screen time and other life activities such as hobbies, family, friends and spending time outdoors notes Common Sense Education (2020). Barnardo's (2017) published the findings of an online survey, 83% of adults reported to have played outside during their childhood, whereas 48% of children in 2017 were reported to spend time outdoors. Digital distractions have contributed to the 35% decrease in outdoor activities. Louv (2005) supports these findings by raising the alarm that digital distractions can decrease a child's time spent outdoors labelling it as 'Nature Deficit disorder' and notes how this can affect the rise of childhood obesity, attention disorders, and depression. Not only does time spent looking at a screen negatively impact time spent outdoors but research suggests that too much screen time can affect sleep patterns, with 88% of children saying that their sleep is negatively affected by looking at a screen before falling asleep. However, evidence is suggested to be 'weak' in supporting parents with recommended screen time states RCPCH, (2018). Internet Matters (2021b) explains how on-screen entertainment amplifies anxiety as it increases central nervous system arousal and along with the blue light of the screen tricking the brain into thinking it is daylight can make it difficult for children to sleep. Parent Zone (2021) advise parents to agree screen time boundaries with their child and encourage other activities in order to create a healthy life balance. However, Welsh Government (No date) highlights that it isn't just the children who are at risk of too much screen time, the parents themselves are at risk of modeling poor screen time discipline. Therefore, Welsh Government (2019) suggests by agreeing as a family on screen time boundaries and modelling healthy screen time habits can have a more positive impact on children. According to Steiner-Adair and Barker (2013) through 'chronic' digital distractions parents are feeling a loss of meaningful connection with their children, whilst children are feeling 'lonely and alienated'. Too much time spent with technology is having 'deep and lasting' effects as children are missing out on significant interactions with their parents, such important interactions that technology cannot provide.

The conflicting arguments regarding the advantages and disadvantages of children's access to digital media has been at heart of the nation's topic of conversation recently, due to the COVID-19 pandemic with the majority of households spending most of their days in front of a screen (Ofcom, 2020). With almost 90% of British children learning

online from home it has become more apparent how the use of digital devices has become a critical tool for children to stay connected to family and friends via video calls, playing games and continue their education through online learning (UNICEF, 2020). Holmes and Burgess (2020) The use of the internet have allowed most children to continue to receive an education online, however the pandemic have highlighted the impact of 'digital exclusion' noting that children from less affluent families do not have internet access and therefore leaving them educationally disadvantaged. Not only have the lack of digital devices affected education but due to social restrictions during the pandemic, staying connected with family and friends have relied heavily on technology, the Welsh Government attempted to rectify this issue by investing up to three million pounds to allow local authorities to provide 'digitally excluded' families with devices and internet connection states Baker et al. (2020). However, Horrocks (2020), states how the 'digital divide' during lockdown has 'widened the attainment gap between disadvantaged children and their peers'.

To conclude, with the future relying on digital competent children and adults; finding the right balance between developing digital skills and leading a healthy life is a priority. Providing children with access to technology offers many positive outcomes and without access children become disadvantaged (Kidron and Rudkin, 2017). However, parents, educators and policy makers must move at the same pace of advancing technology in order to ensure children are safeguarded and are able to access digital media in a safe and productive way to increase opportunities in their future as informed and resilient citizens contributing to their society.

Section 2

A parents and carers guide to Digital Safety

How to safeguard our children in an ever growing 'Digital World'

It can be difficult to know how to keep your child safe online especially in a generation that is digitally evolving at a rapid speed. Therefore, this leaflet is intended to raise your awareness of possible digital risks and to offer tips and advice on how to safeguard your child/children in order for them to access technology in the safest way possible. (Source: NSPCC, 2021)

The Positives

There are many positive attributes that the use of technology can have on a child's development, if used appropriately and in moderation. A few of these may be:

- Improved hand-eye coordination
- Access to a wide range of educational information
- Improved language skills
- Enhances problem solving skills.
- Raised digital competences.
- Better digital communication skills
- Improved knowledge retention

UK Safer Internet Centre (2021);
Webanywhere (2016)

For more information regarding the positive impact of digital devices please visit the following websites:

www.saferinternet.org.uk

<https://www.webanywhere.co.uk/blog/2016/02/top-6-benefits-technology-classroom/>

The Negatives

Too much screen time and the exposure to harmful content, the use of technology can be detrimental to a child's health and well-being. Some of the negative effects are listed below:

- Behaviour problems
 - Educational issues
 - Obesity
 - Lower attention span
 - Increased aggression
 - Minimalized social interaction.
 - Higher risk of cyber bullying, abuse, security risks
 - Health problems
 - Poor sleep quality of sleep
- (MentalUP, 2020; Morin, 2020)

For more information regarding the negative impact of digital devices please visit the following websites:

<https://www.verywellfamily.com/the-negative-effects-of-too-much-screen-time-1094877>

<https://www.mentalup.co/blog/positive-and-negative-effects-of-technology-on-children>

What are the risks and what you can do to help lower these risks?

Online gaming

Gaming can be a great way for your child to relax, socialize with friends and have fun. However, gaming can present risks such as: bullying, trolling, scams, accidental in-game purchases and a risk of talking to strangers.

You can help limit these risks by:

- Checking the content of the game
- Check the age limit.
- Changing the privacy and security settings
- Set restrictions to avoid unauthorised purchases.
- Set time limits to reduce screen time.
- Talk to your child regularly. Take an interest in their online games and make yourself familiar with them.

(NSPCC, 2021)

Inappropriate or explicit content

When children begin to explore the internet, they may come across inappropriate or explicit content. Unsecure sites, adverts and apps such as YouTube exposes risks of children becoming exposed to disturbing content. This content may include radicalization, terrorist attacks, cruelty to humans or animals, self harm sites, pro-anorexia content, sexual abuse, violence, hate sites and online porn.

Help your child by:

- Encouraging your child to talk to you about anything upsetting they have seen online. Be calm and reassuring.
- Ensuring that your child understands age restrictions.
- Ensuring that your child is abiding to the age limitations and are not accessing YouTube or Facebook under the age of 13.
- Agreeing on ground rules when using the internet. Parents can switch on YouTube safe mode and Google Safe Search.
- Explain to your child what is real and not real.

For further information regarding **radicalization or self-harm**, please visit:

<https://www.internetmatters.org/issues/>

(Internet Matters, 2021)

Online grooming

Childnet (2018) describe online grooming *"is where someone befriends a child online and builds up their trust with the intention of exploiting them and causing them harm"*.

Wales Safeguarding Procedures (2020) notes how sexual groomers can victimize a child in just under 20 minutes of conversation. Therefore, it important to understand how online groomers can make contact online with children. Chat rooms, games, social media and live streaming platforms can allow access for groomers. Groomers can hide their real identity by pretending to be children. They may also have access to a child's personal information taken from content posted online by parents/ carers or the child themselves.

Parents and carers, you can help by:

- talking about online safety with your child
- be mindful about what personal content you post on your social media accounts.
- become aware of what signs to look out for
- knowing how to report if you believe your child is at risk or is already a victim of grooming.

For helplines, further advice and more about what signs to look out for please visit: <https://www.nspcc.org.uk/what-is-child-abuse/types-of-abuse/grooming/#>

(NSPCC, 2021)

Cyberbullying

Cyberbullying is a form of bullying that takes place online. This could be through gaming, mobile phones and social media platforms. Anti-bullying Alliance (2015) explains how bullying can have a detrimental impact to your child's identity, physical health, mental health and emotional wellbeing.

You can support your child by:

- Talking to your child about bullying and cyberbullying
- Make yourself aware of the signs to watch out for
- Reassure your child that they can talk to you and tell them of others who can help.
- Help them to practice self care, relax and take time out.
- Report online bullying.
- Report online hate crime and any bullying content shared online.
- Talk to your child's school or care setting.

For more information regarding cyberbullying and how to report it, visit: [Advice for Parents | Anti-Bullying Alliance](#)

Screen time

Welsh Government (2020) notes how too much screen time (time spent on a digital device) can have a negative impact on your child's health and wellbeing. Too much screen time can reduce physical activity, encourage unhealthy eating, cause physical health problems and have a negative impact on sleep. Although screen time can be beneficial to children's development, it is important to find the right balance.

Parents Zone (2021) and Internet Matters (2021b) say that parents can help by:

- Agreeing screen time boundaries with your child
- Setting time limits on your child's device
- Encouraging physical activity and time spent outdoors.
- Exploring digitally together as a family
- Staying aware and involved with your child's digital activities.
- Staying aware of how much quality sleep your child is getting.
- Removing digital devices from their bedrooms at bedtime
- Model healthy digital habits yourself

For more information about recommended screen time the World Health Organisation offers age related guidelines. To view the guidelines, visit:

<https://www.who.int/news/item/24-04-2019-to-grow-up-healthy-children-need-to-sit-less-and-play-more>

Privacy & Identity theft

Children are at risk of having their online identity misused or stolen leaving them vulnerable to identity theft. You can help your child understand what information is safe to share and what information they need to protect.

You can also help by:

- Talking to your child about the risks of sharing information online
- Encouraging your child to think about which friends to share with
- Talking about strangers online and if they come across online strangers, they should avoid them and not share any information.
- Helping your child to choose a username that doesn't contain any personal information.
- Going through the privacy settings with your child on all the apps and sites that they use
- Checking the privacy settings on your child's digital device/s
- Searching for your child's full name on the internet search engines to see what information and photos of them are public. You can ask the websites to remove these.
- Blocking pop-ups to avoid your child accidentally downloading any online virus which could damage the device and steal your child's information.
- Keeping up to date with online safety advice

(Internet Matters, 2021a)

More online safety risks to be aware of:

Sexting

Online pornography

Livestreaming

Online reputation

Useful links

[Online safety issues - advice to support children | Internet Matters](#)

www.saferinternet.org.uk

[Online safety | NSPCC](#)

S

SAFE: Stay safe by teaching your children how to protect their personal information online.

M

MEETING: ensure your child knows the dangers of meeting up with someone they have met online and to always ask your permission first.

A

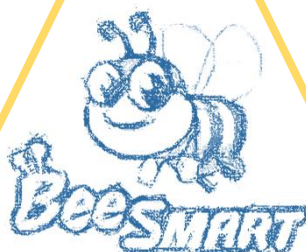
ACCEPTING: ensure your child understands that accepting online communication from unknown senders can lead to digital viruses or contain nasty messages.

R

RELIABLE: help your child understand that online information may not be true. Someone online might be lying about who they are. Stay safe by protecting your personal

T

TELL: always encourage your children to talk to you or a known responsible adult about anything online that is worrying them.



Section 3

Activity Plan for Digital Literacy Skills		
Number of children: 8	Age of children: 5-6	Number of adults: 1
Location: outdoors (weather permitting). Can be done in school hall if the weather is bad.	Preparation time: 30 minutes	Activity time: 1 hours
Resources: 4 fully charged iPads. 4 iPad tripod stands. School field (if weather does not permit the school hall can be used) List of partnered children and their chosen exercise (For example, 10-star jumps, running on the spot) Clip board Pen		
Health and safety: • Check the field for any obstructions or hazards. • Check the children are physically well enough to participate in any exercising. • Check the equipment is in good working order.		
Differentiation: • Children will be taken in mixed ability groups. • Children with 1:1 support will be assisted with their allocated adult.		
Aim/s of activity: This activity is part 2 of a 3-part project. The objective of the project is to produce a fitness video using the Pic Collage and iMovie apps. This is a Pupil Voice project where the children have chosen the project and have planned their video as part of a Health and Wellbeing topic. The finished video will be shared throughout the school where each year group will follow the fitness video during a PE session. The children will choose a partner and work in pairs throughout the project. Part 1: Create a pic collage titling the name of the exercise, add an example photo of the exercise, save pic collage to camera roll. Part 2: Children to film each other using iPads demonstrating their chosen exercise. Part 3: As a class they will collaborate their work into an iMovie on the interactive whiteboard to complete the project. Part 3 will be teacher led. The aim of this activity (part 2) is for the children to become familiar with using the video feature of an iPad to record each other demonstrating their chosen exercise.		
Links to digital literacy/competence outcomes: Citizenship: • Identity, image, and reputation • Health and Well-being		

- Online behaviour and Cyberbullying

Interacting and collaborating:

- Collaboration
- Storing and Sharing

Producing:

- Planning, sourcing and searching.
- Creating
- Evaluating and improving

Data and computational thinking:

- Problem solving and modeling.

Details of the activity:

- Prior to this activity each pair would have chosen their exercise. For example, one pair may have chosen 10-star jumps. Therefore, both children will demonstrate how to do 10-star jumps.
- Children have chosen their own partners. This information is provided in the class list.
- Before leaving the classroom, the children should be briefed on how to handle the iPads and tripods and how to carry them safely.
- In their chosen pairs the 8 children will take the iPads and tripod stands to the field.
- When on the field, the adult should sit the children in a group and explain the objectives of the activity.
- Check with the children if they give their consent to being filmed. If any child wishes not to be recorded, then they can have a go at just recording behind the camera.
- Adult must demonstrate how to access and use the record tool of the iPad. Allow the children to practice pressing record and stopping the video in their pairs. When they have experimented with recording, show the children how they find their recordings in Camera roll and watch the recording back. This allows them to reflect on their videos and decide if they need to retake it. Remind the children to make sure when they are filming the image (in this case their partner) should stay at the center of the screen.
- Explain the difference between portrait and landscape. In this activity they will need to film landscape.
- Adult to demonstrate how to attach the iPad safely to the tripod.
- Remind the children of their chosen exercise and allow them to practice in a space.
- Space the children out across the white track line so that the trees at the back of the field is the backdrop. This way ensuring that children from other classes are not accidentally in any of the recordings.
- Help the children set up their iPads on the tripod stands.
- Allow the children to start their filming. Partner 1 filming partner 2 demonstrating the exercise. The children should then swap to allow both children to have a go at filming and exercising.
- Allow the children time to experiment with the recordings. Encourage them to watch their recordings back, reflect and rerecord if they feel they need to. Support when needed.
- By the end of the activity each partner should have had a go at recording and have also been recorded performing their exercise.
- 10 minutes before the end regroup with the children to reflect on their understanding and level of confidence at recording and accessing their footage.
- Safely carry the equipment back to the classroom.

Section 4

This is a critical evaluation of the Digital Literacy Skills Activity Plan. This evaluation will take a deeper look into how the activity plan can promote the digital literacy and the competence of a group of young children when accessing Information and Communication Technology (ICT). It will also identify how the activity supports the 2019 Digital Competence Framework (DCF).

Firstly, the instructional information given in the activity is clear for any adult undertaking the activity. The objective is also made clear to the children of what they need to achieve by the end of the activity. Through working together to follow a set of instructions given by the adult the children will be learning skills within the problem solving and modelling element of the Data and computational thinking strand within the Digital Competence Framework (2019). With the children choosing their own partners it allows for the activity to be more child centered. Children often show more enthusiasm and excitement when working on a project with a friend. However, when children have the choice of who they work with, there is often children left out, which can have a negative impact on their wellbeing and enthusiasm to participate in the activity (Phillips, 2014). This needs to be considered when doing an activity which involves partner or group work to ensure all children feel included which in return will have a more positive impact on their learning. Moreover, working collectively with a partner and as a class throughout this project to collaborate on a piece of digital work supports the 'Interacting and collaboration' strand of the DCF (2019).

Secondly, the activity is part of a bigger project that of which the children have chosen through their Pupil Voice suggestions. Pupil Voice is where schools give their pupils the opportunity to take part in making decisions about their learning and their school community (Pupil Voice Wales, no date). In this case the children have chosen a project to complete for their Health and Well being topic. Article 12 of the United Nations Convention on the Rights of the Child (UNCRC) states that children have the right to have a voice and be listened to (Children's Commissioner for Wales, 2021). To participate in planning their own learning offers many benefits such as increased engagement, better attitudes towards their learning and improved relationships between the teachers and pupils, by allowing the children to choose this project it

allows the children to have a feeling of ownership over their own learning (McIntyre et al., 2005; Rudduck, 2007). This particular activity within the project is dominantly teacher led, structured activities like this can cause constraints by leaving the children with little time to create the video from scratch and explore their possibilities. However, this activity is mainly adult led in order for the adult to meet a pre-established goal, which is to scaffold how to produce a video on an iPad and raise the children's ability to do so (Playground Centre, 2021). Although this activity is mainly teacher led, the overall project is child initiated. The children would have planned and shared their ideas of how and what they would like to produce, and the adults would then enable and support their project through scaffolding and providing the resources needed. Therefore, making it both child and adult led.

The 'Citizenship' strand of the Digital Competence Framework is embedded into this activity through three of its four elements. Firstly, NSPCC Learning (2019) notes how schools should have written photography and videoing policies in place in order to safeguard children. Although, the adult would have knowledge of the parental consent of each child, the adult in this activity is also instructed to make it clear to the children that they have a choice to be recorded or not. This can support the 'Identity, image and reputation' element within the 'Citizenship' strand through the adult modelling positive digital etiquettes. The children will become aware that it is ethical and respectful to ask permission before filming other people and realise that they have a choice to take part in filming or not. Secondly, when the adult models how to carry and handle the digital devices carefully supports the 'Health and Wellbeing' element. Another outcome in the 'health and wellbeing' element is to 'use digital devices within a controlled environment, time and context'. Lastly, the 'Online behaviour and cyberbullying element within the Citizenship strand links in with this activity through the understanding that digital technology can be used to communicate and connect with others. In this activity the finished product will be shared with other classes within their setting to promote their health and wellbeing topic. This also links in with the New Curriculum for Wales (2020) where one of the four core purposes of the curriculum is for children to become "enterprising, creative contributors who connect and apply their knowledge and skills to create ideas and products". The intention of this activity is to produce a fitness video that can be shared amongst their school community.

The activity compliments a range of learning styles, with the adult explaining (auditory) and showing (visual) the children how to record, it also allows time for the children to experiment with their recording skills and have a go themselves (kinesthetic learning). This can offer a differentiated approach to those children with different learning styles notes [Hilkemeijer \(2021\)](#). Problem solving technical obstacles such as, ensuring the image is at the center of the screen and how to zoom in and out to increase or decrease the image size links into the 'planning, sourcing and searching' element of the 'Producing' strand within the DCF. Additionally, time practicing with the recording features of an iPad can provide the children with opportunities to make mistakes and learn through trial and error. This will allow them to use their critical thinking skills when problem solving to find a solution (New School of Architecture and Design, 2021). By the adult actively encouraging the children to watch their recordings back not only do they learn how to 'use an icon to open a saved file' (linking to the 'storing and sharing' element of the 'Interacting and collaboration' strand of the DCF) but it also encourages the children to self reflect, reflect with their partner and make changes if needed to achieve a better outcome, supports the Evaluating and Improving Element in the Producing strand and also the problem solving and modelling element of the Data and computational thinking strand within the Digital Competence Framework. Furthermore, the time frame given for the activity may not be enough time for the children to experiment on a deeper level with recording. However, multimedia functions are available on all iPads, iPhones and smartphone devices. Statista (2018), reports that in 2020 over 94% of adults between 16-54 in the United Kingdom owns a smartphone device. Therefore, there is a high chance that children would be able to access and practice their recording skills at home on their personal devices. Despite these figures, the topic surrounding the high numbers of children being digitally excluded have been highlighted recently due to the COVID 19 outbreak, outlining how a large number of children do not have access to digital devices at home (Holmes and Burgess, 2020). Therefore, the more access children have to consolidate their digital skills in the school the better. Making digital devices accessible in classrooms will help children to make connections within their learning and practice their digital skills in different forms.

Through designing their own project, the children have again worked within the 'producing' strand of the DCF. The overall project will have used a range of digital apps in order to create multimedia components combined together to produce the final video. The activities have been designed to accomplish the children's chosen outcome. This has made the activity less play based as a play-based activity is considered as open-ended play with no purpose or end goal states Wonderschool (2017). However, through the creation of the video and seeing the end product, it is possible for the children gain a feeling of self accomplishment. Through producing a video of their choice, with their own content and sharing it with others can allow the children to feel empowered and allows them to realise that they can have an impact on the world around them through the use of their digital skills (Martin, 2020). Farmer (2018), notes that teaching children to become media literate will raise their chances of becoming active citizens in their adult years, which coincides with the four core purposes of the new curriculum for Wales; enterprising, creative contributors, ready to play a full part in life and work.

To conclude, the overall activity makes several positive links to the 'Digital Competence Framework' and provides the children with many opportunities to develop skills within this framework. although the Foundation Phase Framework (2015) emphasise how important it is for children to learn through play, this activity has been designed and initiated by the children. Therefore, allowing the children to complete a project of their choice whilst raising their own digital competences.

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