

Media and digital literacy portfolio

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Critical evaluation

The time children spend on digital devices at home and in school settings is rapidly increasing and many are considering the impact that these tools are having on their children and their development. Research made by Dodge et al. (2011) cited in 'Young school children's use of digital devices and parental rules' (2015) found that there is an increasing number of children who use the internet without parental guidance and supervision. It was thought that children were also unaware of the potential dangers of using digital devices and had limited understanding of internet competency. Child Commissioner (2017) stated that 3-4 year olds were among the internet users whose time online increased to almost 8 hours a week. The publication goes on to explain that more needs to be done to create a safe digital environment for young technology users. However the Government and UK Council for Child Internet Safety (2018) suggest progress is being made on concerns such as parental control and age verification. Therefore, children's ability to recognise online danger is slowly improving with the support of these developments. Positive progress is being made by the Government and UK Council for Child Internet Safety (2018) on concerns such as parental control and age verification therefore children's ability to recognise online danger is slowly improving. Ofcom's (2017) publication states the importance of online safety and how there is a duty for the adults in children's lives to regularly discuss staying safe online, how to use technology effectively and to constantly supervise the child. Whilst discussing parents' concerns and mediation, the report outlines how the majority of parents believe that the benefits of the internet and digital technology outweighs the negatives when it comes to the risk of being online.

Shields (2016) discusses the use of digital media in young children and how it has brought positive opportunities with the correct use. The internet and the online world can offer children and young people new ways to communicate and to be creative. According to Shields (2016), technology can support children with research that they may not find elsewhere. New information is at arm's reach and can scaffold a child without the support of the teacher.

Today, children are exposed to a number of different technology devices from iPad and tablets, to video games and mobile phones. All these tools play an influential role on many children's progress and development. However, Bavelier, Green and Dye (2010) explore the possibilities that the use of technology in school settings does not produce more learning than what teachers are currently enforcing. It is also thought that introducing too much internet and digital technology in schools can have a negative effect on individual children. If technology is an educational necessity

then some children who come from low socio- economic families are more likely to suffer from lack of such tools which may result in feeling excluded.

Children are currently growing up in a contemporary world where digital technologies offer possibilities for informal learning. Piaget's theory of Child Development (1936) outlines how children's learning is driven by being independent and logical. This allows a child to develop at their own pace and maturity. Today, there are highly designed digital devices and apps which can cater for children's needs, learning and development. Giving children the opportunity to use technology independently can contribute to their learning by allowing them to discover new information or to improve their work freely without the support of the classroom teacher. However, the Education Endowment Foundation (2017) highlights that technology should be a supplement for teaching and not a replacement for other teaching activities and interactions. Therefore, digital media and devices could be used alongside contemporary teaching to fully support a child's development.

Vygotsky's (1978) Zone of Proximal Development explores the ranges of development and how children can attain under normal circumstances and an upper level that each can attain under the influence of an adult or capable peer. Based on his theory, now in the twenty- first century, digital media can support and scaffold a child as the 'more knowledgeable other'. The internet can support children in their learning by using learning apps such as 'Tric a Chlic' (2016) which is a Welsh language app to strengthen letter sounds and formations. The use of spell check on digital devices is also admired by children as they can recognise any misspellings which enables them to competently correct their work. However, some believe that the use of digital technology can hinder this. Van Dijk et al. (2016) explore the use of technology and how it can effect children's executive functions. Educators and parents should be aware that relying on tools such as spell check and autocorrect can have a negative effect on their child's writing skills. In spite of this, The Department of Education (2012) explore the positives of digital resources and how ICT facilities such as spell checkers is used as a positive strategy for supporting boys with writing. The publication found evidence from Torgerson and Elbourne (2002) on how the use of the internet and online resources can be more effective on a child's spelling than conventional methods.

Slipp (2017) discusses the Reggio Emilia views of early childhood education and how children must be supported and respected by teachers, practitioners and adults. Children should be seen as capable and competent learners who can support themselves in order to reach their full potential. However, although children should be considered as capable and competent, Mitchell (2007) explores the

use of technology in Reggio Emilia inspired settings and how it can have a positive effect on children. The use of technology devices can support children with additional needs when they need additional assistance.

Isaacs (2018) expresses her concerns of the use of technology in Montessori settings. In her publication, it is suggested that digital media is not suitable for play and does not display effective teaching. It is acknowledged that a large percentage of the population have become active participants in the revolution of technology but educators must consider alternative ways to support young children to become digitally literate without over exposing children to computers, tablets and smart phones. Sigman (2012) states that schools should use their status to tackle the amount of time that children spend in front of a digital screen whether it being at home or at school. Educators should have effective communication with pupils and their parents in order to successfully reduce technology use. It is also suggested that schools could reduce screen time in their settings by lessening time spent on technology for good work or 'golden time'.

Taylor and Francis who carried out a study with Stanmillis University College in Northern Ireland (2016) suggested that the use of iPad's and digital technology in the classroom can have a positive impact on children's communication, literacy and numeracy skills. The two year study assessed the impact that digital devices had on a child's learning. The publication also outlines that today's homes are digitally fluent where children are in daily contact with a varied range of digital tools. With 91 per cent of parents stating that their children have access to a touch screen at home, it is apparent that technology play an increasingly significant big role in the daily lives of young children.

The use of digital technology can be used by anyone at any age. Combining teacher interaction with technology can support the development of a child with additional learning needs. Florian and Hegarty (2004) highlights the possibilities of maximising the value of technology in order to have an effective and inclusive education system. ICT can be used to overcome barriers when it comes to the curriculum and children with additional learning needs. Doing group creative research activities whilst using digital devices in the classroom can encourage working with other children which can promote inclusion.

According to Donaldson (2018), in order to have a successful curriculum, a child's digital competence, alongside literacy and numeracy should be the responsibility of all teachers and educators. The report suggests that digital competency can develop and improve skills such as the Welsh and English language, numeracy and health and well-being. It is highlighted that being confident in using

technology should be developed and strengthened across the curriculum and the Digital Competence Framework (2008) should be developed to determine the progression in children's learning.

The Digital Competence Framework (2008) suggests that nursery aged children should be increasing their abilities to becoming independent learners who are able to identify and recognise their own work on a digital screen. It also outlined that children between the ages of 3 and 4 must understand that some devices require activation such as a swipe, password or press of a button. However, even from the young nursery age, the framework also highlights that children must begin to learn about the safety of using digital devices and the internet and must identify simple rules to keep themselves safe online.

Many teachers use digital technology in the classroom by using a digital points system in order to reward good behaviour. Similar to Skinner's (1938) conditioning experiment, it is believed that children can be trained to behave a certain way. Associating positive behaviour with a reward is seen as an appropriate means of reinforcement. For a child, visually seeing their behaviour being approved is satisfying and beneficial. For a teacher, it allows them to maintain a high degree of performance within the classroom.

It is apparent that children's development and health are being affected by their use of digital technology. Mustafaoglu et al. (2018) discusses the growing use of digital media in children and how time spent on devices must be monitored for the sake of their mental health, sleep and development. Overusing gadgets such as smartphones, tablets and televisions can lead children to being inactive. They are less likely to go play outside and socialise as they become increasingly addicted to their technology. Lakdawalla and Philipson (2009) also discuss the effects digital media can have on children and it is thought that a child's weight and eating habits are also at risk. The authors explore how children who excessively use technology create an imbalance in their hormone levels that affects their metabolism. The publication suggests that this causes children to crave sugary snacks and carbohydrates in order to maintain high energy levels. Mccaig (2019) also discusses the impact that technology has on weight gain, obesity and poor food choices. It is suggested that overusing digital devices is related with food cravings and lack of self-control which can result in weight gain.

The UK Council for Online Safety (2016) highlights the importance of online protection and safety features which can allow parents and educators to protect children on digital devices. Privacy settings, geographic location and blocking certain content are amongst some of the tools adults can use to protect children online.

The NSPCC (no date) can be a positive support tool for adults and children to reduce the risk of being online and using digital devices. However, although it is heavily advised for parents to implement safety features on their children's devices, the United Nations Conventions on the Rights of the Child suggests that a child's needs and rights must also be considered. According to article 16, a child has the right to keep aspects of their life private. It is even suggested that "they have the right to keep their phone calls and emails private." (UNCRC, no date.)

Excessive screen time can have an effect on a child's brain development. Bergan, Davis and Abbitt (2015) consider the effects that technology has on a child's development and compares digital play to physical play. Through a study, they found that technology- play had an effect on brain development with children who have higher levels of screen time have lower structure integrity of brain tissue which is essential to learning, communication and brain function. In order to protect a child's brain development, incorporating a time limit to their digital device usage could be extremely beneficial. Unicef (no date) discusses how limiting screen time at a young age can develop a child's brain power and also encourages human interaction.

Research Russo and Osborne (2012) has proven many positives but equally as many negatives regarding the increasing use of digital devices and the effects it can have on children. They discuss how there is no doubt that digital devices have become an integral component of a child's daily life with many believing it enhances learning. Technology is being used more in educational settings with schools and educators using digital devices to encourage independence. Teachers often urge children to research and discover answers self- sufficiently, which often means turning to an iPad or computer to find their solutions. Using the internet and digital devices can also support children who have additional needs to assist their daily challenges. However, whilst discussing how technology is effecting our society, Abramovits (2015), believes the use of technology can diminish relationships and effect a child's social skills. Many children are more apt to being virtually sociable rather than going out and physically socialise with others. There are also dangers of using the internet and technology with some children being at risk of coming in contact with strangers or online bullying. Parents, educators and most importantly children must be aware of the positive and negative digital devices and the internet can have and how to use these tools safely and effectively.



A GUIDE FOR PARENTS

Open conversations with your children

According to The National Society for the Prevention of Cruelty to Children NSPCC (2014) talking to your child regarding internet safety can be difficult but is extremely important. You and your child should feel relaxed and open and should talk regularly about online protection. Due to the implications of social media and digital technology, The Government (2016) states it is important to be involved in your child's online world.

Here are some questions to discuss to support you and your child when it comes to online safety-

- What are you doing online?
- Who are you talking to online?
- What games are you playing? Can you show me how to play?
- What apps/ websites are you visiting and why?
- Do you post any personal information online?
- Can people see what you look like?
- Do you have any online friends? Do you talk to them online?

An Ofcom (2015) study shows that due to the increasing popularity of apps and portable devices, parents were not always aware of when their children were on their digital technology and what they were doing online. Ofcom suggests that the key to digital safety is to talk frequently to your children and to introduce parental control on their devices.

Parental control (NSPCC, 2014)

From blocking inappropriate content to control purchases within apps, paternal control is essential when it comes to keeping your child safe online. Installing parental control software on devices can allow parents to keep track of what children can and cannot view on the internet. These softwares can put a time limit on games, apps and websites, block any unwanted content and allow parents to view what their children have been doing on their devices.

1. Settings
2. Screen time
3. Set up privacy passcode
4. Contents and privacy restrictions
5. Enter passcode and activate

Tips for children

1. Do not post any personal information online
2. Think carefully before posting pictures or videos of yourself
3. Keep your privacy settings as high as possible
4. Never give out your passwords
5. Do not befriend people you don't know
6. Do not meet up with people you have met online
7. Remember that not everyone online is who they say they are
8. Think carefully about what you say before you post something online
9. Respect other people's views and

Digital devices, internet and mental health

Pantic (2014) discusses the link between mental health issues and technology and how the connection is becoming stronger than ever in recent years. From bullying, anxiety and depression to eating disorders, here are some signs to look out for...

- Loneliness
- Isolation
- Mood swings
- Lack of eating/ over eating
- Low self esteem
- Lack of sleep
- Increased sensitivity
- Illogical thinking



Age restrictions

Student number- 1803428

- Youtube- 13
- Facebook- 13
- Instagram- 13
- Snapchat- 13
- TikTok- 13
- Twitter- 13
- WhatsApp- 16
- Fortnite- 12



Snapchat



Fortnite: Battle Royale



TikTok



WhatsApp



Instagram



YouTube

Where to find support

NSPCC (2014) The NSPCC can support parents with online safety when it comes to advice on sexting, video apps, online games, social media and helping parents understand the risks of their child being online.

Child Net (2018) Child Net can provide parents all the information they need on understanding the online world and you're your child might be up to when using their digital technology.

South Wales Police (no date) South Wales Police work closely with other agencies to provide practical advice to help parents keep their child safe online and prevent any harm the online world can cause.

The Government, UK council for Internet Safety (2016) Their guide supports parents in helping their children understand the importance of staying safe online and what risks they may face whilst using digital media.

Statistics**Internet Safety 101 (2019)**

- Teachers believe that cyberbullying is their #1 concern in their classrooms when it comes to digital technology
- 1 in 3 young people have said to have been a victim of online bullying
- 52% of parents admitted to being worried about their child using social media

Shared hope (2013)

- 25% of children look older online
- Almost 29% of parents let their children use the internet without safety restrictions or supervision

Ofcom (2019)

- 1% of 3- 4 years olds have their own smartphone with 19% having their own tablet
- 52% of 3- 4 year olds go online for almost 9 hours a week
- 45% of 3-4 year olds use YouTube to watch videos and TV programmes

Safer Internet (2017)

- 45% of children admit to using a filter to improve the way they look online
- 79% of youth have had negative comments made on a photo that they have posted on social media
- More than 45% of young people admitted to worrying about the way they look when they post their photos on social media

Digital technology at school- Estyn (2012) states that schools across Wales are investing in the latest technology and are improving their teaching to prepare their pupils with skills to use digital media safely and effectively. Estyn encourage independence when it comes to ICT but also enforces appropriate safety measures such as particular software tools that prevent pupils from breaching the viewing of unsuitable online material.



Children's Commissioner (2017)

Pacey (2016) guides' parents by providing information and support when it comes to their children and online safety. In recent years, young children have begun to use technology from a young age more than ever. From phones to tablets to laptops, 52% of 3-4 year olds spend an average of 9 hours a week on technology or the internet. Children's use of the internet is getting younger and time spend on technology is getting longer. This indicates that parents need to be aware of how important online safety is for young children and teens.

Activity plan

Activity Plan		
Activity: <i>Baking Little Red Riding Hood Cupcakes</i>		
Number of children: 6	Age of children: 3-4	Number of adults: 1
Location: Nursery setting	Preparation time: 10 minutes	Activity time: 40 minutes
Resources: • Mixing bowl • Wooden spoon • Sieve • Weighing scales • Electrical mixer • Digital timer • Cupcake cases • Baking tray • Oven • Aprons • iPad • Risk assessment • Eggs • Self-rising flour • Caster sugar • Unsalted butter		
Aim/s of activity: • Make cupcakes for Grandma from the book, Little Red Riding hood • Discover new baking words and phrases • Work as a team • Discuss the story, the recipe and method • Discuss how the mixture changes from wet to solid • Use the iPad to take step by step photographs during the activity		

- Upload the photographs to collage app

Links to outcomes:

- Use appropriate vocabulary to discuss the book
- Follow instructions to create the recipe
- Work together to prepare, measure and mix the ingredients
- encourage children to experience appropriate risk (using kitchen appliances)
- Use an iPad to complete the digital task of taking photographs and uploading to a collage app

Differentiation:***Simplify-***

- Assist the children in measuring the ingredients
- Use a pre made mixture
- Use picture recipe cards
- To not use a collage photograph app

Challenge-

- Bake a more challenging cake which requires more ingredients
- Introduce word recipe cards for the children to read and follow

Health and safety:

- Risk assessment
- First aid kit
- Hair tied back
- Knives and electrical equipment to be monitored at all times
- Fire hazards such as the oven, tea towels, clothing, and electrical sockets to be observed.
- Everything must be on the child's level to prevent any dangerous spillage
- Children and practitioner must wash their hands
- Ensure that the cakes are cooked through and cooled before serving
- To ensure that the iPad is safe and used appropriately whilst baking

Role of adult:

- Adult should be near to support, extend and question the children's knowledge and skills

- Ensure that all children use the kitchen appliances and electricals appropriately and should be supported if needed
- Ask open ended questions to encourage the children to discuss the activity and the book.
- To ensure that the Ipad is used appropriately and effectively during the task

The activity:

- Children must create cupcakes for grandma after reading the book Little Red Riding Hood.
- Children must prepare the ingredients and consider the methods used.
- Children must tie their hair back and wash their hands thoroughly and discuss the importance of cleanliness whilst cooking.
- Children must wear aprons.
- Children should take photographs of the ingredients and the steps they follow to bake the cupcakes. (Children mustn't take photographs of others without their consent.)
- Children must follow their recipe cards and use the weighing scales for the appropriate amount of ingredients (Discuss why you must measure the ingredients accurately)
- Whilst being observed by the practitioner, the children should use the electrical mixer to mix the ingredients together.
- Children can begin to spoon out the mixture evenly into the prepared cupcake cases.
- With the support of the adult, the children can put the baking tray in to the oven and set the digital timer for 18 minutes.
- The practitioner must take out the baking tray and ensure that the children understand that it is extremely hot.
- With the support of the adult the children must upload their photographs to a collage making app.

Critical evaluation of activity plan

Purpose of the task- After delivering and completing the cupcake baking activity with children it is clear that the purpose of the task is to bring a fun element to the book *The Little Red Riding Hood* whilst also introducing the use of digital devices with nursery aged children. The children can associate the baking activity with the book and begin to have appropriate discussions about the story and the reason behind the baking activity which increases their knowledge about the book. Throughout the activity the children were able to strengthen their technology use by taking photographs of the ingredients, method and outcome of the cupcakes. The National Literacy Trust (2017) discusses the use of digital devices in the Early Years and how they can support children in many aspects of their education. Technology can support early language development, communication and literacy skills. By introducing the use of iPads and collage apps to this activity, the children were offered a new and different opportunity to learn. Boyd (2011) also discusses the role of technology in vocabulary development and explores how teachers and practitioners incorporate digital devices in to their daily tasks and activities.

Benefits- A beneficial feature of this activity is that it allows the children to work together to create the cupcakes and observe the mixture turn from liquid to solid as it cooks. The children were able to begin to acknowledge the importance of measuring and having the appropriate amount of ingredients in order to get the best outcome. A guide to the Early Years Foundation Stage (2011) suggests that baking and cooking activities allows children to develop their language by using vocabulary such as 'greater', 'smaller', 'heavier' and 'lighter' to compare measurements and quantities.

Child development/ foundation phase/ play- The Statutory Framework for The Early Years Foundation Stage (2017) outlines that for nursery aged children, activities should be planned to encourage play through a mixture of adult led and child initiated tasks. Play is considered an essential element to a child's development which allows them to build their confidence as they learn and explore. The *Little Red Riding Hood* cupcake activity allows the children to spontaneously discuss the book whilst bringing new experiences to learning about the characters and story.

According to The Foundation Phase Framework (2015), cooking and baking activities in the early years can promote all seven areas of the frameworks learning stages which includes language, literacy and communication skills, mathematical development and creative development. As baking is considered an enjoyable and fun experience by many children, often they are not aware that they are developing such fundamental skills. Early Education (2012) publication also highlights the importance of introducing activities such as cooking

and baking to nursery aged children as it allows them to play and explore whilst actively learning in a creative environment.

Impact of digital devices and iPads (links to the curriculum, foundation phase)- The use of digital devices in this activity allows the children to demonstrate their technology knowledge by taking photographs and creating a collage of the ingredients and methods used to create and bake the cupcakes. The Digital Competency Framework (2008) outlines that nursery aged children should be able to identify their work independently and demonstrate signs of understanding when it comes to rules and safety. According to the Framework, during the activity the children must be aware that they shouldn't take photographs of others without their consent and that actions can have consequences.

Digital Competence Framework Strands- The Welsh Government (2018) states that digital competence is a set of skills, attitudes and knowledge which enables a child to use technology confidently, creatively and critically. The four strands of the Digital Competence Framework include Citizenship, Interacting and collaborating, Producing and Data and computational thinking. These strands are digital skills to be attained by children aged 3 to 16 and are supported in classroom tasks and activities. The cupcake activity outlines the use of producing, with the children creating a sequence of photographs to highlight the process of baking the cupcakes. Donaldson's (2015) Successful Futures review also outlines the importance of children being digital literate as it is a significant part of being in the twenty-first century. The review highlights that children must be able to use digital technology in order to create and display their work which is encouraged in the Little Red Riding Hood baking activity.

Estyn/ Donaldson- Estyn (2018) discusses the preparation for the Digital Competence Framework whilst referring to Donaldson's (2015) Successful Futures report. It is recommended that the Digital Competence Framework should be mapped across the whole curriculum and ensure that all ages are given opportunities to develop and progress. Activities which include digital devices should begin in nursery settings can develop the children's skills and allow them to become skilled practitioners from a young age. Using different apps and websites gives children the opportunity to explore and become creative whilst being in a safe and monitored environment.

Cognitive development (Piaget vs Vygotsky) - Cooking in the early years encouraged children's thinking, problem solving and creativity. It gives children the opportunity to use the knowledge they already have and apply it to the current activity. Counting, measuring and following directions all contribute to their cognitive development. Piaget's Theory of Cognitive Development (1936), which is discussed in Lefa's (2014) publication outlines the importance

of allowing children to make mistakes whilst problem solving. With the practitioner observing rather than assisting the children throughout the activity. This gave the children the opportunity to follow the directions independently and experience the activity through their actions. However, whilst Vygotsky (1934) also supports that children must be actively involved in the learning and development process, his theory of Cognitive Development is more focused on social interactions. Rather than observing, it is thought that the adult is seen as a more advanced individual who can support and develop more complex conversations and activities.

Negative impact- As many are aware, there is supportive evidence that digital devices and technology can have positive impact on children in early education. Ng (2015) confirms there is a rise in technology use in the classroom with lessons often being supported by the digital devices. However, there is research that proves that the use of digital devices can have a negative impact on a child's development. It is suggested that using technology can slow down the brain which effects how the mind processes information. Gottschalk (2019) outlines how parents and practitioners should limit a child's time spent on technology. Children under the age of five should not spend more than an hour a day on digital devices in order for their physical health, emotional well- being and brain development can grow and progress. Allowing children to use technology devices in educational settings in a focussed activity such as the cupcake baking task can allow the practitioner to observe the children. While the children undertake the iPad aspect of their activity the practitioner can limit how much time is spent on the devices and can monitor what apps and websites the children are using.

Extend- To extend the activity further removing the use of the electrical mixer would encourage more of the use of fine motor skills and hand eye coordination by allowing the children to mix the cupcake mixture by hand. Feeney (1992) discusses how a child's fine motor skills and their hand- eye coordination is developed by cooking and baking activities. The benefits of the baking activity without electrical cooking equipment would allow the children to refine control over small hand muscles.

Next time- While the focus of this activity was to learn and discuss the story The Little Red Riding Hood, the children were also given the opportunity to work as a team but also independently to bake the cupcakes. The children were able to expand their digital competence by using the iPad to take photographs and create a picture collage of their activity. Although the role of the adult was to observe the activity, they were also able to support the children wherever needed. As mentioned in the Digital Competence Framework (2008), the children should be able to recognise their own photographs to select for the

collage but due to the young age of the group, some may have needed additional assistance to use the collage app on the iPad. It is clear that there are benefits of using digital devices but disadvantages must also be considered. Digital Competence should be encouraged from a young age but it is important for practitioners to find an appropriate balance for technology use and to monitor how much time is spent on digital devices within the classroom.

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