

Straker et al (2018) recognize that children all over the world use technology, and in order for children to thrive, it is implemented throughout education in order to provide them with ict knowledge for their future adult lives.

The digital competence framework (2018) recognize that digital competence is now a requirement of the curriculum, alongside literacy and numeracy.

The digital competence framework was implemented after the Welsh assembly government set out the plan derived from the Donaldson report (2015).

The main aims of this are to try and support children to become critical thinkers of the future and that an imbedded knowledge of digital skills will be needed in order for children to prosper in society by the time they reach adulthood.

Children are already growing up in a world today with an abundance of technology available to them. In a report by Ofcom (2015) it was recognized that children now use technology more than double the amount that it was used in 2005, with twelve to fifteen year olds now spending more time online than watching a television. Within the report this averaged to be approximately 18.9 hours a week.

This was also acknowledged in a report from the world health organization (2017) It also recognized that there has been a steep rise in the amount of use of technology by children with children using the internet for two hours or more a day.

They indicate that children can experience poor health with the report indicating that children are not getting enough daily exercise leading to poor fitness levels and obesity.

The accessibility of broadband within the home as well as fixed broadband packages on mobile phones has made using the internet as easy as watching the television.

The early years foundation phase (2015) support the view that technology needs to be used within schools, understanding that children need access to media in order to express themselves. They also recognize that by using audio and visual material as well as ict interactive software, children are able to communicate in different ways. For children with additional needs or who may be non communicative, ict can be a positive tool in supporting them and their needs. It is recognized that children will pick up the use of computers and tablets quickly, whilst

others may struggle. This is supported by the welsh assembly government's rights to action (2004).

The delivery of this should still support children's holistic development, with individual approaches to to each individual child's development rate. Children should have access to art, music, and outdoor play as recognized in the works of Reggio Emilia. This is supported by several articles within the uncr, article 13 entails that children have the right to freedom of expression when using the media, article 16 entails that children's privacy should be respected when using the media.

It is also underpinned by article 17 of the united nations convention rights of the child (1989). This entails that children all have a right to access media and gain information about their own country and countries beyond that. This can be any information from television, radio, internet sights and more. This supports and upholds article 29. By being educated with information from the media, it allows children to understand their human rights, cultural identity and language, allow children to place value on the world they live in and more.

Two of the most popular items of technology available today amongst children and teens are tablets/ipads and mobile phones.

Hermann(2015) recognizes that using an ipad within a classroom can encourage pupil participation and engagement, with pupils and practitioners being able to share instant feedback. This is where a practitioner may recognize immediately where a pupil is struggling and intervene.

This could be likened to vygotsky's theory of the more Knowledgeable other, in this case both the ipad and the practitioner or teacher become the tool to support and facilitate a child's learning.(

Straker et al (2018) recognize that with the introduction of touch screens, included with tablets and mobiles, there is more opportunity for children to use technology with ease and children are using technology at much younger ages. In 2017, they discovered that a staggering 98% of homes in America have a touch screen mobile phone. Shockingly, 35% of the overall use of the screen time was used by children under the age of two. This averaged out to 14.2 hours per week.

When children spend vast amounts of time as indicated in the studies by Ofcom (2015) and the World Health Organization (2017) there are indications that this use of the internet can have implications for poor health for children, both physically and mentally and emotionally.

An example of this could be an app such as Snapchat (no date). These apps allow users to manipulate photographs of themselves and share this information with contacts in their mobile devices or tablets. They are able to choose from an abundance of filters that change skin tone, eye colour, whiten teeth and slim down their face, changing their appearance drastically from the original photograph that they took.

This then leads children to have an unrealistic view of how they should or do look, with teens especially being noted as heavily affected, as they strive to look like the exaggerated images within the app. The app was voted the fourth most negative app that children use in regards to the impact that it has on the children's health and mental wellbeing. Children commented upon the app as being fun and a good way to make themselves look 'prettier'. (National Online Safety, 2019).

Body image, and the way in which children and young adults view themselves is now important to girls as young as six years of age, they already express desires to be thinner, and take interest in diets and the latest weight loss DVDs and apps. This is recognized by Doherty and Tiggeman, (2006) who understand that there is a direct link between themselves and their peers, and the role that the media plays in this.

What this shows is that children are growing up in a world where the environment around them places unrealistic emphasis on appearance. This is called the sociocultural environment.

Children using the internet and their tablets can also be at risk of cyberbullying. This can be detrimental to children's mental health and self-esteem. It has become increasingly common, especially between young adults and teenagers. Many apps allow individuals to directly message each other or to post comments upon their online activity or social media pages such as Facebook.

In an review on YouTube (2017), they identify some negative ways in which children can be bullied as a direct result of technology, this can include exclusion, not all children are able to afford the up to date technology that seems to be available to many today, this can lead to

isolation and children not being included in everyday conversations that friends or peers may have with each other online, especially if they cannot afford to have broadband at home, this would mean a child's only time to access the internet would most probably be in their setting. Children can be harassed with continual online bullying, which is recognized as threatening, continuing messages of aggressive nature. This can affect a child's mental well being severely, leaving them frightened to go online or even go to school.

Children can be humiliated if bullies read out private information from their devices or share personal images. As practitioners we understand that this is illegal and all children have the right to have their personal information kept private. This is a requirement of the data protection act (1988)

More serious forms of online bullying can be referred to as cyberstalking, this is relentless bullying using the the internet and is committed commonly in email and apps. It can also be used by adults inappropriately to contact children for abusive purposes.

Children can also become victims of 'fraping'. This is when someone may get hold of their phone or tablet and use their apps or email to impersonate them and send out harmful messages or personal photographs that they may have stored to their phones. They may not understand that once a photograph or image is put out online, it may never be fully deleted and will be online for all to see.

Fake profiles exist online, and can be used to contact children and young adults, or to continue harassment without the real perpetrator being evident. This can also allow adults to talk to children, by taking on the persona of another child.

'Dissing is where children are cruelly harmed by photographs or harmful comments online.

It is evident that children need emotional and practical support whilst using their personal devices such as mobile phones and tablets, and these can be sought from a child's relationships and the support that these attached relationships can provide. (Nutbrown,2011).

The nspcc(2018) recognize that parents need to be available to open conversations about what their children may be accessing online and worrying about and what may be having a negative effect on the personal health and wellbeing.

Parents should show children how to block or report individuals sending harmful content and be available to provide emotional support and recognize changes in their personal behaviour, It is important that children's time on phones or tablets is limited.

In a report by the daily mail by Best (2016) it was recognized that children are regularly using the ipad or mobile phone at bedtime. Children between the ages of six and thirteen need quality sleep in order to have a productive day.

There are long term consequences to having poor quality sleep, including obesity, and poor mental health. Within the article it was found that 23% of children were not read a bedtime story, with four out of ten children having an ipad in their bedroom.

In an article within The Guardian newspaper, Weale (2015) recognized that parents are not making the time to read to their children, and use apps to read bedtime stories. Even when some children are not ready to lose their bedtime stories, they are being left to read alone as soon as they are capable. 68% of children reported that this was a special time that they spent with their mothers and fathers and so replacing this special time with an ipad is a sad time for children, with some parents not being able to spare 15 minutes to read a book but spend many hours a week on their personal devices. (Ofcom, 2018)

The nhs recognize that a lack of sleep amongst teens has been linked to cardiovascular disease in later life, as well as the previously mentioned obesity and poor mental health.

They recognize that for the production of melatonin comes from light and hormones. Digital devices such as ipads and mobile phones can stop this production by emitting too much light.

They also recognize that sleeping often, more than the normal can indicate signs of depression. Depression and low self esteem could then be linked to some of the issues that children may encounter by the use of ipads and mobile phones. Ultimately, children should have time limits set for their devices, good quality interaction with their parents and carers with opportunities for them to discuss and show adults their online activity and not just expected as such young ages to understand all the dangers that the media can pose and left to explore it at free will. Moderation is key.

Activity to support children's digital literacy.

Children to design healthy recipe books with each child responsible for one recipe.

Date of activity- 1/2/19.

Age of children- 6 to 7 year olds.

Group size- four to a group using one ipad.

Aims of the activity- promote awareness of healthy eating choices and recipe design. Children can research, using ipads, by themselves, with peers and practitioner intervention where needed, recipes from all over the world. Practitioner will demonstrate safe areas to search, for example popular children's apps such as cbeebies who have many recipes available.

Children can use the ipad to type up and print out their recipes and use any images that they wish.

The children are also able to access any art materials if they wish to do so in order to design their recipes, drawing or painting images to their recipes but to encourage ict use, the recipe will be typed, with the support of the practitioner where needed.

Tools and equipment- Tablet/ipad, printer, art materials such as paint or pens, laminator and laminating paper.

Outcomes of the activity- Children build upon previous knowledge of healthy eating, as part of the foundation phase(2015). Children take turns to research recipes from reliable sources, for example, the cbeebies website that are healthy.

This is a child led activity which should encourage children to explore food and recipes in a fun way. Once they have decided upon a recipe and typed it up using an ipad or computer, it is then up to the individual child how they wish to illustrate their recipe. This can be with drawings or painting, or continuing with the use of the internet and using images derived from it.

The recipes will then be laminated and booklets containing all recipes given to children to take home and enjoy with families.

This activity encourages turn taking, peer collaboration, and supports ict use within the classroom.

How a recipe activity can support children's digital literacy.

The activity detailed above can support children's digital literacy in several ways, Nutbrown (2011) recognizes that in this day and age, literacy is more than just putting a pen to paper, nor is it merely

reading paperback books. It involves technology in all its forms. She recognizes that there are arguments for and against the use of technology in early years settings.

However, Siraj-Blatchford et al (2003) recognize that when used correctly, to support the learner, it can support children's development when used with imagination, supporting children's cognitive and social development.

The digital competence framework (2018) has been implemented as a result of the Donaldson report (2015) which will encourage children in their use of skills within the classroom to become enabled, confident users of digital devices when they become adults.

Digital competence becomes one of three main areas which also include literacy and numeracy and is aimed to be delivered across several subjects throughout the early years foundation phase curriculum, whilst still upholding a holistic view of the child as recognized in the works of Froebel.

The framework has four main strands which are equally important. These include Citizenship, interacting and collaborating, producing and data and computational thinking.

The digital competence framework will be inspected by Estyn to ensure its effective delivery in schools.(Estyn)

When uptaking the recipes activity with a group of year two children (ages six to seven) there are several links that can be made to the digital competence framework.

Beginning with Citizenship, included in this is identity, Image and responsibility. as a practitioner children can begin to understand that information that they put into search bars online, can leave a digital footprint. It allows the practitioner to work together with the child and begin to help them to understand the trail that they leave behind online. This could be done by showing them the history of their searches online.

If children at this age log onto school ipads, it can also provide the practitioner with an opportunity to explain to the child why it is important to keep personal passwords and data safe. It is illegal to share personal information. This is stipulated in the data protection act (1988).

It can also be linked to the Health and wellbeing strand of citizenship. Children can begin to understand how the use of their time on digital devices and accessing the media can have its advantages and also disadvantages. As children are designing healthy recipe books online, practitioners can open the conversation about healthy eating, exercise, which could include how too much time spent online can lead to obesity due to a lack of exercise.

They can be taught about digital rights, licensing and ownership. The children partaking in the activity will add their name and date to their recipes.

When making links to the strand, interacting and collaborating, children are able to use the ipad to create their recipes, for example by using word. This supports the collaboration element and from this document they can learn how to save it into a personal work file.

When producing their recipe books, they have an opportunity to use search engines, such as cbeebies to research healthy recipes, this links to the planning, sourcing and searching strand of producing.

The activity also provides support for learning and links to other areas of the foundation phase(2015) Children can celebrate cultural diversity when doing this activity, with children coming from different races and religions, children may choose to look for recipes from other cultures. For example with many children now coming from areas all over the world, for example poland.

Within the recipes, children begin to understand measurements, volumes and more. Pound (2006) understands that maths is an important part of a child's everyday life. The use of numbers can allow children to count, order and measure and transfer these skills into other areas of their lives.

Children are able to lead this activity partly by themselves with the knowledge and support coming from both the practitioner and the ipads or tablets. This can be linked to Vygotsky's theory of the more Knowledgeable other where both the practitioner and the tablet become the more knowledgeable other. It could also be argued that children could view their peers as the more knowledgeable other, as peers who may be more competent with digital skills, helping children who may be struggling.(Crowley,2014).

The activity can support children's welsh language development. The recipes could be typed in either english or welsh depending on the stream of the class that the activity would be delivered in. Children could search children's apps such as cyw (no date).

Children's holistic development is supported throughout the activity. Children are free to design their recipes however they choose. This includes art materials or they can continue using images from the internet. This area is play orientated and supports the children's holistic development. This was recognized in the works of reggio Emilia, who understands that children need a multitude of ways in which to learn and focus heavily on children's holistic development. (Thornton et al 2010).

Information for parents-Keeping children safe online.

The national online safety (2019) website understand that a collaborative approach is needed to keep children safe online. This includes parents, carers schools and more.

They understand that it can be hard for parents and carers to discuss with children, their experiences of the online world. They recognize that it is key to open up the conversations. They offer advice on how to initiate these conversations and how to explore apps with your children in order to make sure they are safe, this is available to access at <https://nationalonlinesafety.com>.

Children need to have open conversations with their parents to stay safe online. Parents can set boundaries as a result of these conversations on what they feel is appropriate for their child to access. However, parents should take the time to listen to their children's views and opinions. This is recognized in article 12 of the uncr (1989)

Don't be afraid to ask your child uncomfortable questions, for example if they have reached a site and seen hurtful comments, connect this to the real world, using yourself as an example. provide emotional support and comfort and teach your child how to understand that online 'trolling' is part of the digital world. Set up steps to block or unsee such material. (nspcc,2018)

Setting up parental controls.

The Nspcc(2018) recognize that children using the internet are now open to endless possibilities for creating, learning and discovery, with many opportunities for play.

However, the digital world is changing rapidly. Parents can help to protect and safeguard their children by doing a number of things, most importantly, setting up parental controls.

Sometimes children may innocently search for something online within a search bar and end up reaching highly unsuitable material for their age. Parental controls can help to ensure that their searches are safe, for example, google has a safe search tool for children called Kiddle, which include trusted sites that are safe.(google,no date).

Parental controls allow parents to control the amount of time children can spend online, as too much screen time has been linked to poor mental health and obesity amongst other health problems. (world health organization,2017)

For more information, parents can access information via the nspcc website and the uk safer internet centre.(nspcc,2018)

Set the example.

Chelsey (2005) recognizes that technology is embedded in our everyday lives. They suggest that the overuse of technology, mobile phones in particular can blur work and family life . It is important that families stay connected in order to ensure the emotional wellbeing of their children. This is recognized in bowlby's theory of attachment. (Bowlby,1954)

Bullying and cyberbullying.

The nspcc (2018) recognize that for children, online bullying can be detrimental to their emotional health and wellbeing. They recommend that parents try to stay calm, and remember that as recognized, it can

be hard for children and young adults to begin the conversation with parents about what they experience online. The nspcc (2018) understand that children's self esteem can be affected by cyberbullying and recommend that parents take time to do activities that they enjoy, for example a game of football.

If children will not talk to a parent, childline offer a 24 hour service to provide help and support. More information is available at www.childline.org.uk.

Enjoy family time

The Uk chief medical officers (2019) recognize that although there are many benefits to the use of technology, overuse can get in the way of everyday life. They recommend that at mealtimes, conversation rather than screen time is beneficial and it is important that parents listen to, and interact with their children

This reinforces the attachment bonds between children and parents and families, offering emotional support which helps children's personal wellbeing.

They also recommend that families get outside and exercise. Children need physical exercise to be healthy.

Laws that protect children online.

The united convention on the rights of the child (uncrc,1989) have several articles that protect children when it comes to their use of digital technology.

These include, article 12,17,16,13,29 and 36.

Parents can read a summary of these rights at <https://www.savethechildren.org>.

Reference list.

Best, S (2016) *Streaming: using phones and ipads instead of dreaming*.United kingdom

Bowlby, J (1953) *Childcare and the growth of love*.London :Penguin books

Burrell, I (2013)

<https://www.independent.co.uk>

(Accessed 2/2/19)

Crowley, K.J (2014) *Child development:a practical introduction*. United Kingdom:Sage publications

Chelsy, N (2005) *'Blurring boundaries? Linking technology use, spillover,individual distress and family satisfaction*. Buckingham: open university press.

Curtis, S (2013) *How technology is changing childhood*.The telegraph:United Kingdom.

Data protection act(1988)

<https://Legislation.gov.uk>

Dohnt, H.K and Tiggemann, M (2006) *Body image concerns in young girl's. The role of peers and media prior to adolescence*. Pp 35-135.

Garvis, S and Lemon, N (2015) *Understanding digital technologies and young children: an international perspective*. Uk: Routledge.

Hermann, A (2015) *Positive versus negative effects of ipads*. The independent:United kingdom.

Holmes, J., 1993. *John Bowlby and attachment theory*, London ; New York: Routledge

Kenny, J., 2010. A question of trust. *The Times Educational Supplement*, (4899), p.O42.

Kinney, L and Wharton, P (2007) *An encounter with Reggio Emilia*.Uk: Routledge.

Nutbrown, C (2011) *Key concepts in early childhood and care*. United Kingdom: Sage publications limited.

Siraj-Blatchford, J and Siraj-Blatchford, I (1995) *Educating the whole child: cross curricular skills, themes and dimensions*.Buckingham: Open university press

Thornton, L. & Brunton, P., 2010. *Bringing the Reggio approach to your early years practice* 2nd ed., Milton Park, Abingdon, Oxon ; New York: Routledge.

'National society for the protection of cruelty to children'

www.nspcc.org

(Accessed 21/2/19)

World Health Organization, 2017

www.worldhealthorganization.org

(date of access 12/2/19)

National online Safety

<https://nationalonlinesafety.com/resources>

(date of access 12/2/19)

United convention on the rights of the child (1989)

<https://save-the-children-org>

(Accessed 12/2/19)

Children and young people's rights to action

www.assembly.Wales

(Date of Access 12/2/19)

Welsh Government (2016). *Foundation Phase Framework*.

<https://gov.wales/topics/educationandskills/foundation-phase/?lang=en>

(Accessed 23/2/19)

<https://beta.gov.wales/sites/default/files/publications/2018-03/succesful-futures-a-summary-of-professor-graham-donaldsons-report.pdf>

(Accessed 12/2/19)

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

Straker et al., 2018. Conflicting Guidelines on Young Children's Screen Time and Use of Digital Technology Create Policy and Practice Dilemmas. *The Journal of Pediatrics*, 202, pp.300–303.

Best, S(2016) Streaming instead of dreaming: using phones and tablets before bed stops kids from sleeping and can lead to health issues.Uk:Mailonline.