Children's Research Digest
Growing up in the Digital Environment
January 2020

SUMMARY

Introduction

In this summary document, we offer an overview of the Children's Research Digest: Growing up in the Digital Environment, published in January 2020. The Editorial and the Commentary pieces by our conference key note speakers, Cliona Curley – with Ruth Geraghty – and Colman Noctor, respectively, are provided in full, followed by a summary of the articles and summaries.

A sincere thank you to all the authors who shared their research, our wonderful guest editors for their considered editorial, and our reviewing panel, Dr Tracey Monson, Elli Wilson, and Dr Lorraine Swords, and the anonymous reviewers for their time, patience and precision. We are also ever grateful to the Children's Research Network Advisory Committee, and the Directors of Trinity Research in Childhood Centre for their ongoing support.

Editor

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Editorial:

Growing up in the Digital Environment

**by Cliona Curley, CyberSafeIreland CLG
and Ruth Geraghty, Centre for Effective Services**

It is a great pleasure to present this edition of the Children's Research Digest on the theme of our 2018 conference 'Growing up in the Digital Environment'. Digital technology is increasingly a normal part of Irish children's lives and the consequences for their safety and well-being is often a topic of public concern. In a single week at the end of 2019, newspaper headlines reported that "One in four children 'have problematic smartphone use'" (The Guardian, 29th November 2019) "Social media is fuelling eating disorders among children as young as TWELVE (The Daily Mail, 4th December 2019), and even, "Selfies and smartphones blamed for rise in head lice among schoolchildren" (The Irish Times, 26th November 2019). Should we be concerned or is there an element of moral panic at play? This timely edition of the Children's Research Digest raises the question: what it is like to grow up in a society where everyday life is shaped by digital technology?

As with previous generations, a healthy childhood still involves playing, taking risks, forming our first significant relationships, developing a sense of identity and a sense of independence from family. For contemporary children, these activities sometimes now take place in the digital environment. Children often report the positive opportunities they gain from engaging with digital media, such as finding a safe space for expression and for developing a sense of identity, and a means for creativity and learning far beyond the boundaries of their immediate physical environment. The problem lies in the transposition of these essential developmental activities to an environment that is primarily created for adults, and is highly commercialised and monetised (Livingstone, 2019). It is hard for anyone to predict how a child's digital footprint, which commences from the moment a parent posts their first baby photos on social media, could be exploited in the future.

In 2019, as we celebrate thirty years of the Convention on the Rights of the Child, the UN Committee on the Rights of the Child is developing a General Comment on children's rights in relation to the digital environment, which will set a new international standard for children's rights in a digital world (5Rights, no year). The intention of the General Comment is to support the child to fully participate in the digital environment and to develop their digital skills, while protecting them from exposure to harm during their digital interactions. The range of research papers presented in this edition equally suggest a balanced approach to researching both the opportunities and risks for children and young people as they engage with technology.

Our guest editors for this edition are Cliona Curley and Ruth Geraghty. Cliona is an advisor to CyberSafeIreland CLG which is the Irish children's charity for online safety. In December 2018 Cliona delivered a keynote address at the Children's Research Network conference on the work of CyberSafeIreland to educate and empower Irish children to be stronger, smarter and safer online. Ruth has been the Data Curator for the Prevention and Early Intervention Research Initiative since 2016 and has worked with many researchers to digitally archive their research data. This editorial is presented in the form of a conversation between Cliona and Ruth.

Ruth: There has been much discussion about the ongoing encroachment of digital technology into our personal lives, especially through social media, and how this might interact with our mental health. For example, the My World Survey 2 found "a significant relationship between time spent online (more than 3 hours) and higher levels of depression and anxiety and lower levels of body esteem" (Dooley, B., O'Connor, C., Fitzgerald, A. & O'Reilly, A., 2019, pp. 138). The authors of this research emphasised that this is not necessarily a causal relationship, for example young people with depression may be using social media more often to minimise their negative mood. Another longitudinal study of teenagers found no association between time spent online and depression and anxiety (Coyne et al., 2020) and the authors suggest that it is worth examining the context in which social media use occurs. To ensure a positive experience from social media, in this issue, Colman Noctor proposes that we must become critical consumers, by learning to question the authenticity of what is presented to us online, and by regulating our own desire-response to what we see. This would seem pertinent advice particularly for individuals already experiencing with mental health difficulties.

From what you see in your work with teachers and children in primary school, does online media play any role in generating or fuelling anxiety in primary school-aged children? Are there ways in which children and young people are more vulnerable than adults to these, as Noctor refers, "personalised and rich mediums [that] steer and drive our desire"?

Cliona: We chat to thousands of children (usually aged eight to thirteen) each year about their online experiences through our schools programme. I genuinely believe that most of the children that we meet are having mainly positive experiences online. What they love most about the Internet, besides the sheer entertainment potential, is the ability to spend more time with friends either chatting on apps or playing games together online. It can also provide opportunities for much needed support, for instance for young people experiencing doubts over their sexuality. However, access to the Internet can exacerbate or magnify real life issues, in particular, concerns over popularity or self-image, as well as presenting additional opportunities to be bullied or harassed. Children and young people can also be bombarded with unhealthy images and information that could increase anxiety levels or even instigate harmful behaviour. Online pornography, and content glamorizing self-harm or anorexia would be obvious examples. But this can also be very subtle, in the form of unrealistic expectations of perfection presented by popular influencers and is likely that children will be more susceptible to these negative influences than an adult. Worryingly, in our research published in our 2018 report , we also found much higher levels of access and risky behaviour online, along with lower levels of parental engagement, among children from low-SES backgrounds.

Ruth: When we talk about keeping our children and young people safe online, sometimes parents and other adults are depicted, or self-depict, as being unable to keep up with the online experience of children and young people, in particular their use of popular social media apps and games. The WYRED project described by Paul Butler and his colleagues has taken an interesting approach to empowering children and young people as critical users, by guiding them through process of reflection about their digital lives, exploring issues that the children and young people have identified themselves as important. What role can adults take in enabling the children and young people that they care for to become critical consumers of digital media? Are there key skills we can help

them to develop, without needing to know everything about what's popular online right now?

Cliona: The latter part of this question is the critical bit – as parents, we really don't need to know everything about every new app or game. What is vital, however, is that we are engaged in what our children are doing online. We need to know enough to be able to ask them intelligent questions, agree the rules, and to be able to keep an eye on their activity. If they are watching YouTube videos, ask them to tell you which they like and don't like. If they want to use a particular app, do a bit of research yourself (Common Sense Media is great for a quick review), then ask them to tell you about the app. The more we can normalise these conversations, the better. As a parent or a teacher, you are continually shaping their minds, honing their critical thinking skills and teaching them the lessons that we hope will get them through life's challenges. It's tempting to treat their online activity as separate to this life skills preparation, but if we don't engage in it directly, we can't influence.

It's also really important that they understand that sometimes they will have to deal with difficult situations online, and that they may not know what to do. A typical example is someone saying something nasty about a classmate of theirs in a chat group. Help them to understand that the smartest thing that they can do is to chat with you, or another adult they trust, and that you can work out the best solution together. Regular open and positive communication between children and their parents about their online experiences is a worthwhile investment that will come good if and when things do go wrong for a child online.

Ruth: In terms of the positive aspects of technology, most children and young people have unfettered access to a vast library of knowledge, and the possibility for modes of learning that were unavailable when their parents were in school. Desmond O'Mahony suggests that computer usage can have a positive effect on a child's academic performance (in this case, their mathematical performance at ages nine and thirteen), when it is used for self-directed learning, such as surfing, and for discovery, such as for a school project. Chloé Beatty and Suzanne Egan found that five-year-old children who engage in a mix of screen time activities fare better in tests of non-reasoning ability than

children who engage in a single type of activity - even if these are educational games. The authors of both of these articles have moved away from assessing the impact of screen time in terms the amount of time children spend on digital devices and have instead considered the types of activities children engage in - advancing a more nuanced analysis of the relationship between screen time and cognitive development. It also seems inevitable that technology will increasingly be incorporated into the pedagogy. The ongoing research study reported by Sandra O'Neill indicates positive attitudes among future educators on the use of technology in the early childhood setting. While the small experimental study by Lydia Mannion and Claire Griffin shows potential for the use of computer-based programmes for improving second language literacy in the primary school classroom. What do you see as the opportunities and the risks, for children's academic education, when this education is delivered side by side with digital technology?

Cliona: I would see mainly opportunity rather than risk in using digital technology as an enabler in the education of children. In addition to the positive effects outlined in these studies and others, use of technology in learning also provides a direct opportunity for parents and educators to model and promote positive use of technology. In reality, children are individuals, with individual needs, and some may thrive on more traditional methods of learning, while others will respond better to clever uses of technology. A child that struggles with understanding how to multiply numbers may finally crack it with the help of an online app, while another finally develops their skills when they take a liking to the traditional board game Monopoly. We need to not fear technology, nor to lump it all in one basket. O'Mahony's reporting of positive influences of informational and exploratory uses of computers alongside negative influences of consumptive and interruptive styles of technology use demonstrates the need to differentiate. There is both good and bad, advantage and disadvantage that comes along with technical innovation.

Ruth: Over the past decade we have seen rapid technological development, particularly in the area of information and communication technology, along with enthusiastic uptake of this technology by the public. Many research studies, particularly using questionnaires, now rely exclusively on online methods for data collection, as discussed

by Grainne Hickey and Francis Chance in this issue. Even the youngest members of society are engaging in digital services. Research from the UK in 2019 found that in the space of a decade the use of digital devices by pre-school aged children has increased from twenty-three percent in 2009 to seventy-six percent in 2019 (research by Childwise reported in The Times, November 2019).

As digital technology becomes increasingly embedded in our lives, governments must rapidly update national policies to extend the preservation of the rights of citizens to include their digital interactions. And yet, it appears challenging to write policy that adequately defines roles and responsibilities of various actors who are operating in a chain of actors in the digital environment. For example, the 'surveillance capitalism' exposed by the Facebook data scandal in 2018 brought the issues of power and accountability of the technology industry into the public consciousness. The Government of Ireland's Action Plan for Online Safety is due to expire at the end of 2019. Edel Quinn's article calls upon the Irish government to take this opportunity to develop a national policy response that is based on an international standard, to address the issues faced by children in the online environment, particularly give our position as the European hub for many of the leading technology companies. Quinn puts forward the Committee of Ministers of the Council of Europe (2018) 'Guidelines to respect, protect and fulfil the rights of the child in the digital environment' as a useful framework for any new iteration of a national strategy, as these guidelines manage to balance the protection of children from harm with the preservation of their rights to engage with and utilize the online space.

CyberSafeIreland has been very active in conducting research on Irish children's engagement with digital technology, and recently commissioned research on the age verification practices of social media platforms and messaging apps, and the resultant collection of data on children who are under the digital age of consent. This is perhaps one example of why a voluntary code of conduct for industry is entirely unsatisfactory. What response would you like to see from government and from industry that would genuinely empower children, parents and teachers 'to navigate the online world in a safe and responsible manner'?

Cliona: As outlined in CyberSafeIreland's annual report 2018, we need a long-term national strategy in Ireland that sets out how we are going to address the risks that can arise from children being online. This strategy should set clear goals and measurable targets, ensuring effective regulation of the online service providers. It should also be developed following consultation with young people themselves, and recognize that young people may have different views and needs to adults in relation to their online experience. This is evidenced in this issue by the WYRED project and supported by Quinn who suggests that a Government response to supporting children to lead positive online lives should be based on a rights framework. We have lobbied hard for the institution of a Digital Safety Commissioner. It is essential that this office is given a proper mandate and the necessary resources to hold online service providers to account. It is complex as not all online platforms have a presence in Ireland, hence not all will be subject to any regulation that is brought in, so a two-pronged approach to regulation, such as the one adopted by Australia, is required. Providers should also be encouraged to develop platforms and apps that are ethical by design, with privacy and a safe and positive user experience at the forefront.

We also need strong response mechanisms available to parents, schools and particularly anyone working with children, with access to expert helplines, advice and resources. CyberSafeIreland is currently working on developing a public awareness campaign targeting parents and children and we would like to see the government supporting initiatives such as this. We need to establish social norms around online safety. We want to get to a place where parents are able to make informed decisions about their children's online use.

Finally, there needs to be much greater focus given to, and investment in, the education of all children on digital safety, literacy and well-being. We would like to see a digital champion in every school in Ireland to provide much needed expertise and support to principals and deliver up to date and effective education to children, parents and teachers.

References (Please see editorial online)

Commentary:

Growing up in an era of technology and desire

**by Colman Noctor, Trinity College Dublin /
St Patrick's Adolescent Mental Health Services**

It is well documented that the technological evolution is changing many things about how we live. Technology now impacts upon our work lives, our family lives and our intimate and close relationships and perhaps we are living through the greatest social experiment of all time. However, it may also be the greatest emotional experiment of our time.

I have worked in Child and Adolescent Mental Health for over twenty years and I can confidently say that in the last five years I have seen an increase in the presentation of young people with anxiety. This steady incline of presentation has been difficult to apportion to any one variable, but perhaps the impact of the technological evolution has had some role in its occurrence. It is my view that three consistent themes exist in the narratives of young people that I see, and these themes include expectation, desire and vulnerability.

It is my view that social media and internet technologies can be viewed as agents of interpersonal desire. Internet technologies mean that we are now producers as well as consumers of media, often simultaneously, and this means that users can shape, customize and direct online interactions. These interpersonally rich modalities offer graphic apps and transformative multimedia cues that create a feeling of presence for the user. The rich sense of presence is often suggested as a means of tackling loneliness and isolation but also the 24/7 availability of social media sites for viewing, content-creating, and editing allows for exponentially more opportunities for negative social comparison and rumination. This powerful medium can transport individuals to psychologically involved domains and manipulate beliefs and attitudes.

The narrative about internet usage and screen time is misdirected. Of course, there are real fears and anxieties around cyber-safety in terms of cyber-bullying, inappropriate exposure to violent and pornographic material. However, perhaps there are more latent and insipid consequences to our collective mental health that are less obvious. It is important that we do not become distracted by the thin end of the wedge in terms of these aspects of online activity and miss out on the more pervasive elements. The distraction from our relationship with ourselves and the obsession with external validators may well be contaminating our desire and creating a larger reality/ expectation gap which is leaving us feeling disgruntled and creating a society of discontent. Perhaps the answer does not lie in the regulation of in internet content, but rather it involves the regulation of human desire.

The social media platforms are conduits for human connection which can influence our choice architecture, our lens of expectation and manipulate our desire. It is therefore imperative that we learn to become critical consumers of the technology and pay more attention to enhancing our ability to question its authenticity and in turn regulate our own desire. Regulation of our human desire is difficult at the best of times, but it is more challenging when there are influences at play that see desire as a currency for marketing and develop personalised and rich mediums to steer and drive our desire. We need to re-invest in a conversation about what is meaningful and learn to re-establish our own autonomy over our own value systems. We need to re-align our own sense of agency and develop a media and emotional literacy which enhances our ability to hold onto our own value systems and not have those dictated to by companies who want to sell us things and keep us distracted.

Link to Article

Summaries of Articles

Grainne Hickey & Francis Chance – Using digital technology to develop an understanding of parenting experiences in Ireland: Overview of the Giving our Children the Best Start in Life survey (Summary)

Giving Our Children the Best Start in Life was a fully online qualitative consultation using Survey Monkey, developed and carried out by the Katherine Howard Foundation. The online consultation involved over 1000 parents, revealing policy-relevant insights into parent needs and priorities over the first three years of their child's life, as well as their perceptions of the contexts, systems and services which can influence early child outcomes. The article also discusses the success of using a digital platforms as a means through which to seek the views of parents, a methodology that can be developed and expanded as a tool moving forward. (Link to full article)

Lydia Mannion & Claire Griffin – A Digital Precision Teaching Intervention in the Primary Classroom: Effects on Irish Reading Fluency (Summary)

Precision Teaching (PT) is an evidence based strategy for Irish literacy instruction used to track the learning and performance of students which targets common deficiencies and promotes reading fluency (Cummins, 1982). This paper discusses the impact of a three-week computer-based Precision Teaching intervention on the Irish reading fluency of a group of primary school pupils. The results of the study highlight the value of such a programme to aid students' learning of Irish, as well as the wider potential of digital intervention strategies to support the educational attainment of pupils in the primary classroom. Link to full article

Sandra O'Neill – Technology in the Early Childhood (EC) Classroom Starts with the Educator – An Exploration of the Use of Digital Tools by EC Undergraduates (Summary)

Due to the pervasive and even increasing exposure of children to the digital environment, there is a growing responsibility for early childhood educators to advocate for the appropriate use of technology with young children and to act as 'media mentors' for parents, families and other professionals. Such an endeavour requires appropriate training. This paper discusses the effectiveness of the module Technology in Learning, delivered to Year 2 BA in Early Childhood Education students. The findings of the survey suggest that engagement in this module positively impacts pre-service educators' perspectives on the use of technology as a learning tool in ECEC. Link to full article

Edel Quinn – Do Children have Rights in the Online World and can they be enforced? An Analysis of the Council of Europe's Guidelines on Children's Rights in the Digital Environment from an Irish Perspective (Article)

Recent studies suggest that fifty percent of six to eighteen year olds spend a significant amount of time online; and report they are 'always online'. While young people report the positive aspects of online activity, the risks posed by online use are well documented. The paper draws from European and International rights based frameworks to argue for a rights based approach to supporting children online, which would ensure that the full panoply of rights of all children in their online lives is respected, protected and fulfilled and would support policy makers in their approaches to supporting children's online activity. Link to full article

Paul Butler, Mary O'Reilly & Mairead McMullen - WYRED Project - Methods, Learning and Insights (Article)

The WYRED project is funded through the Horizon 2020 EU Research and Innovation programme and provides a space for children and young people to engage in reflection about their digital lives. The findings of the research carried out by nine partners across the EU with 1000 children indicated six thematic areas regarding children's perceptions

about their digital lives, such as online presentation of self-image and its relationship with resilience; gender discrimination; cyberbullying and cyber security; as well as fake news, and the complicated nature of trust. The WYRED project highlights how young people can shape and direct their online interactions, thereby appearing to enhance their autonomy and personal agency. (Link to full article)

Desmond O'Mahony: Modelling the Relationship between Computer Usage and Mathematics Performance Using Three Waves of the Growing Up in Ireland Study (Article)

This paper uses longitudinal data from over 8,000 children from the Child Cohort of the Growing Up in Ireland study to explore the relationship between home computer usage and how well children performance on standardised mathematics tests at nine and thirteen years of age, and in their Junior Certificate. The results reveal both positive and negative impacts of home computer use on children's mathematics performance over time. The article argues that rather than overall 'screen-time', it is the type of computer activity a child engages in (informational purposes vs social media / entertainment) that is important for long-term skill development. (Link to full article)

Chloé Beatty & Suzanne Egan – Screen-Time and Non-Verbal Reasoning in Early Childhood: Evidence from the Growing Up in Ireland Study (Article)

With screen use becoming increasingly prevalent at a younger age, it is important to research the possible impact screen use has on early cognitive development. This article examines the screen use of 8,912 five-year-olds and their reasoning abilities, using data from the Growing Up in Ireland study. Results show that both the amount of daily screen time, along with the type of screen activity (e.g. video games / educational games / television), impact a 5-year-olds' reasoning ability. However, the results caution that screen use plays a very minor role in the development of reasoning ability, suggesting other factors (e.g. home learning environment, parental education) should also be investigated when examining the role of screen use on cognitive development. (Link to full article)